YACHTING

Volume LVII APRIL + 1935 Number IV

Courtesy, Robert E. Tod

Dragging sail. Schooner "Endymion's" main boom sweeps the sea tops on her Atlantic passage of 1905. In the race of that year she took 13 days, 22½ hours for the course

Which Course to the Eastward?

By

ALFRED F. LOOMIS

OUR GOOD friend Uffa Fox, whose book, "Sailing, Seamanship, and Yacht Construction," is a mine of information and a delightful personal revelation, has this to say about the 1931 race to Plymouth: "At the outset every vessel was confronted with the question as to which was the fastest course to England. The great circle course just skirting Nova Scotia was my choice, in that besides being 200 miles shorter, it had stronger, because colder, and more reliable fair winds, and I knew how *Typhoon*, not a fast boat, had crossed from Cape Race to the Bishops in fifteen days, with a crew of only three. The only thing against this course was the unfavorable Arctic or Labrador current as far as Cape Race. The more southerly course had only the Gulf Stream in its favor." . . . Uffa recommended the northerly course but "all to no avail, for in the American paper YACHTING had appeared an article on the best way to cross to England, which had strongly urged the southern and Gulf Stream course, and the Gulf Stream, with its promise of a free ride, was strong magic, so everyone seemed after the southern course. . . . There have been, and there always will be, arguments as to which is the faster course; but a few more races will prove the general superiority of the northern, for the reasons I have given above."

With a Transatlantic race between Newport and Norway scheduled for next June, further argument of this lively subject may be of general interest. As I am the unfortunate wight who wrote the article advising the southerly course (thereby depriving of victory all yachts which took this course in 1931) the issue is now joined. Uffa is right when he says there will always be argument as to which is the faster course; but he is, in my opinion, on debatable ground when he says that a few more races will prove the superiority of the northern route. It is the purpose of this article to inquire into past races to see which way, if either, the proof lies.

For the benefit of those readers who haven't a clear mental picture of the routes across the North Atlantic to England I should, perhaps, more closely define the northerly and southerly courses. The northerly one is as close an approach to a great circle from Nantucket Lightship to the Scilly Isles

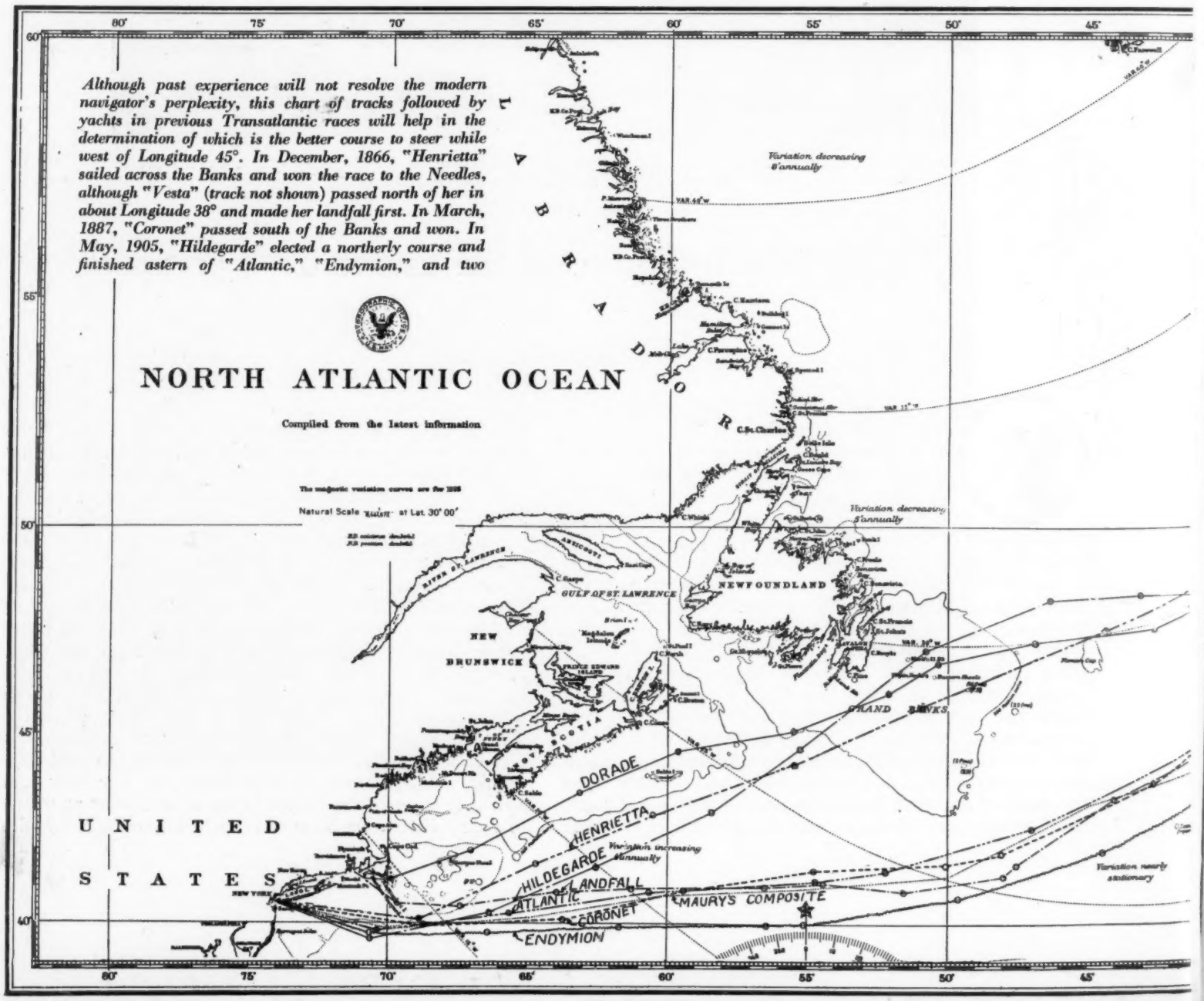
as it is possible to sail without going overland, and one which therefore passes north (inside) of Sable Island, cuts straight across the Grand Banks of Newfoundland, passing within picture distance of Cape Race, the southeasterly point of Newfoundland, and goes north of Latitude 50° in approximately Longitude 36°. The southerly course avoids the Grand Banks and proceeds east from Nantucket Lightship about nine hundred miles to Longitude 50°, from which point in Latitude 41°:30′ it continues in a great circle to the Scilly Isles, never going north of the fiftieth parallel. The northerly course is about 150 miles shorter, but a week of Gulf Stream sailing will give a vessel more than 150 miles of easterly set in compensation for the greater distance of the southerly course.

The Race of 1866

Now let us delve into the past to see whether, as in the case of *Dorade*, in 1931, victory rewarded those yachts which took the shortest cuts across the Grand Banks. The first ocean race, that of December, 1866, is a pretty good argument for the northerly course. Three schooners, all approximately 100-footers, took part — *Henrietta*, *Vesta*, and *Fleetwing*. *Fleetwing* took the most southerly route (but a more northerly one than that above defined), cutting across the tail of the Banks some 150 miles south of *Henrietta* and *Vesta*, and reached Bishop Rock 8 hours and 40 minutes behind *Henrietta*, which subsequently won at the Needles by approximately the same margin. *Vesta*, whose average course was more northerly than *Henrietta's*, actually led when the landfall on the Bishops was made, but lost second place through errors in piloting.

It would be satisfying in pursuing an investigation of this kind if occasionally the issue were clear-cut, so that one might say that this yacht sailed a definite course and won, the conditions for her and her competitors being identical throughout. This ideal of simplicity does not obtain in the present case. *Henrietta*, commanded by the famous packet ship captain, "Bully" Samuels, sailed a more northerly course across the Banks and a less northerly course the rest of the way, and might easily have sighted Bishop Rock first if she had not hove to for several hours in mid-ocean while *Vesta* was scudding under a reefed foresail. *Vesta* might have won if she had not lost time by coming to leeward of the Bishops and if her local pilot had not missed the Needles channel in a light fog. *Fleetwing*, even though she took the most southerly route, sailed a shorter distance than *Vesta*, but lost valuable time while searching fruitlessly for six members of her crew who were washed overboard and lost. I do not mention these conflicting circumstances to confuse the issue, for despite them it is fair to say that Samuels' strategy in sailing *Henrietta* on the northerly course was instrumental in giving her the victory.

Henrietta made her best five-day run of 1204 miles while in the vicinity of the Banks, and *Fleetwing's* best five days of only 1111 miles were run almost concurrently from 60 to 170 miles farther south. *Vesta's* best five-day mileage, piled up along a route lying between the other tracks, was 1176


80° 75° 70° 65° 60° 55° 50° 45°
60° 55° 50° 45° 40°
Although past experience will not resolve the modern navigator's perplexity, this chart of tracks followed by yachts in previous Transatlantic races will help in the determination of which is the better course to steer while west of Longitude 45°. In December, 1866, "Henrietta" sailed across the Banks and won the race to the Needles, although "Vesta" (track not shown) passed north of her in about Longitude 38° and made her landfall first. In March, 1887, "Coronet" passed south of the Banks and won. In May, 1905, "Hildegarde" elected a northerly course and finished astern of "Atlantic," "Endymion," and two
NORTH ATLANTIC OCEAN
Compiled from the latest information
Natural Scale
LABRADOR
NEWFOUNDLAND
GULF OF ST. LAWRENCE
NEW BRUNSWICK
NOVA SCOTIA
GRAND BANKS
UNITED STATES
Variation decreasing 8′annually
Variation increasing 8′annually
Variation nearly stationary
DORADE
HENRIETTA
HILDEGARDE
ATLANTIC
CORONET
ENDYMION
LANDFALL
MAURYS COMPOSITE

miles. Strong westerly gales raged over the Banks, but farther east, when all three yachts were in those high latitudes which Uffa supposes to be particularly windy, moderate to light southerlies and southwesterlies prevailed. (It is worthy of mention in this connection that the records show that a strong fair wind is generally carried longer by an eastbound vessel in the low and middle Forties than it is in the high Forties and low Fifties.)

The Race of 1887

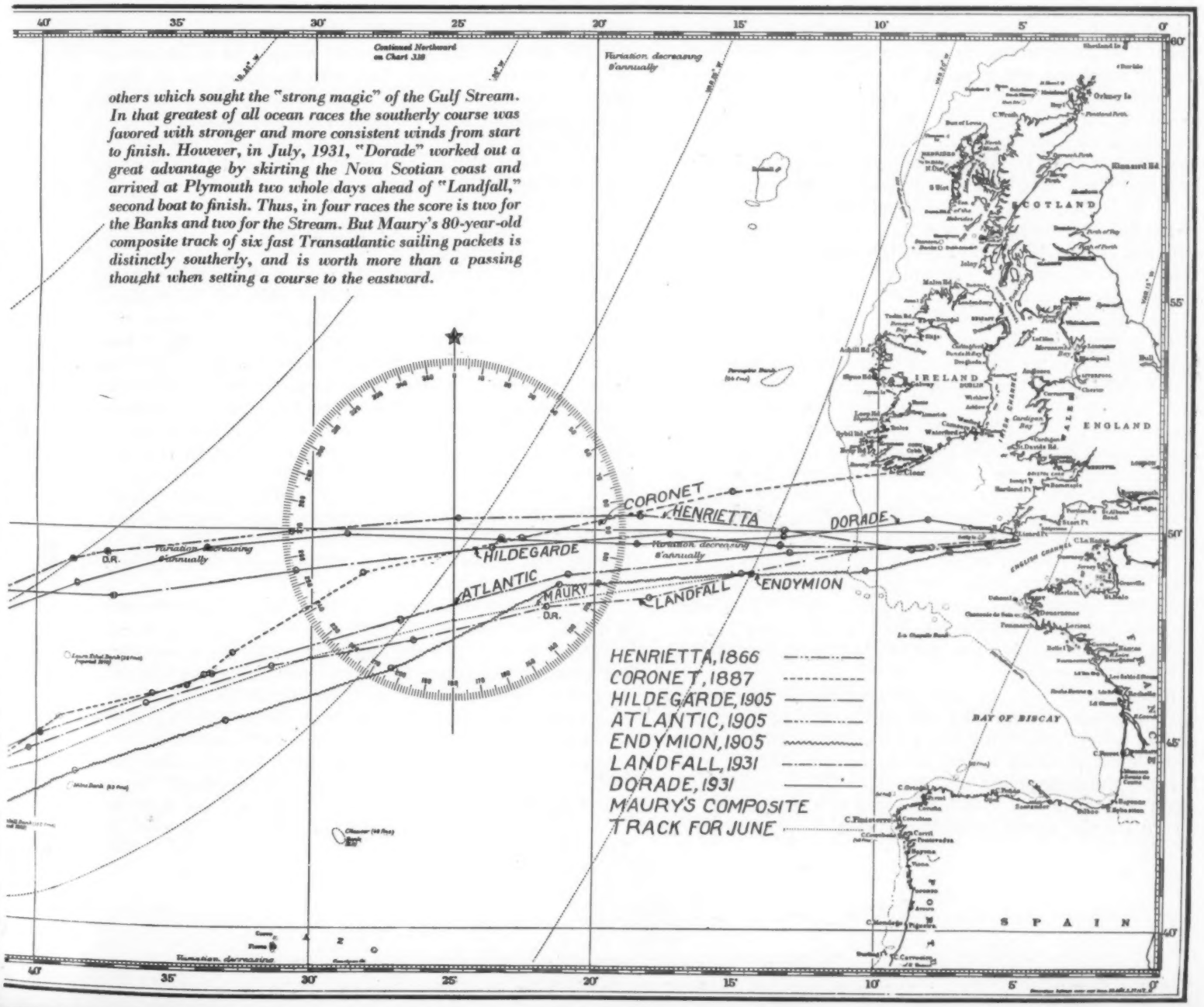
Now we turn to the event of 1887 between the schooners *Coronet* and *Dauntless*. The race took place in March, and the time of year strongly influenced the captains of the two vessels in their choice of course. Ice was being brought down by the Labrador Current, and it would have been a reckless soul indeed who elected to go north to meet it. Wherefore, "Bully" Samuels, who in this race commanded *Dauntless*, chose the southern route and did not go north of Latitude 42°:05′ until he had crossed the fiftieth meridian, at which juncture he was 60 miles south of the tail of the Banks. Working up to Latitude 44°:35′ on the day following, a low water temperature and a smooth sea in a howling gale betokened the near presence of ice, and the course was bent southeastward until the water temperature rose and the menace was passed. Thus it happened that the *Dauntless* kept south of the forty-fifth parallel until the halfway point was reached.

In the meantime *Coronet* had also kept to the south'ard during the first week of racing, passing east of the meridian of the Banks in Latitude 41°:34′, thirty miles south of the *Dauntless* track, but a day ahead of her. Inasmuch as *Coronet* won it is a temptation to lay her victory to the southerly course sailed. But this is not the entire truth. *Dauntless* at this time was twenty-one years old. She leaked like a sieve (Captain Samuels subsequently alleged sabotage) and she could not be driven as the two-year-old *Coronet* was. Although *Dauntless* ran up a day's record run of 328 miles, as against *Coronet's* best run of 291 miles, and totaled 1139 miles in five consecutive days to *Coronet's* 1102 miles for a like period, the older yacht could not keep up her headlong pace in moderately heavy weather and crossed the finish line off Queenstown, Ireland, thirty hours behind the *Coronet*. With my particular argument in mind it is interesting to note, however, that *Coronet's* best five consecutive days were run off in the Gulf Stream, commencing two noons out from Sandy Hook, and that *Dauntless's* faster spurt was achieved as she neared the Irish coast.

The Race for the Kaiser's Cup

Next we come to the greatest race to the eastward, that of 1905, which, as everybody knows, was won by the three-masted schooner *Atlantic* in the remarkable time of 12 days and 4 hours. The start was on May 17th, and the course was from Sandy Hook Lightship to the Lizard. May is a bad month for ice, and justifiable fear of it may have helped persuade seven of the eleven competitors to take the southerly

others which sought the "strong magic" of the Gulf Stream. In that greatest of all ocean races the southerly course was favored with stronger and more consistent winds from start to finish. However, in July, 1931, "Dorade" worked out a great advantage by skirting the Nova Scotian coast and arrived at Plymouth two whole days ahead of "Landfall," second boat to finish. Thus, in four races the score is two for the Banks and two for the Stream. But Maury's 80-year-old composite track of six fast Transatlantic sailing packets is distinctly southerly, and is worth more than a passing thought when setting a course to the eastward.



East of the Grand Banks the seas roll long and high, but seldom steep

route. Those four which elected to cross the Banks were the schooners *Hildegarde* (146 tons), *Fleur de Lys* (86 tons), and *Thistle* (235 tons), and the bark *Apache* (307 tons). They finished the race in the following positions: fifth, seventh, tenth, and last, and their showing was not a good argument for the Banks route.

Eliminating from consideration the bark *Apache*, which seems to have needed a gale of wind to move her, there are several points of interest observable in the courses sailed by these yachts. *Thistle* kept closest to the Nova Scotian shore, skirting the 100-fathom curve; *Fleur de Lys* sailed about 50 miles south of *Thistle*, and *Hildegarde's* course was as much as 40 miles south of *Fleur de Lys*. On three successive days the more southerly yacht worked out a lead on the one next to the northward of her, so that when *Hildegarde* cashed in on her advantage by steering sharply northeast and crossing the courses of the others at the western edge of the Grand Banks, she was 60 miles ahead of *Fleur de Lys* and 120 miles ahead of *Thistle*. *Hildegarde* then continued her northeasterly course, passing less than 50 miles from Cape Race, and so maintained her lead that she finished the race 4 hours 40 minutes ahead of *Fleur de Lys* and 14 hours and 36 minutes ahead of *Thistle*. *Hildegarde's* time to the Lizard was 14 days 4 hours and 53 minutes. It may be thought that the relative speeds of the three boats determined their order of finish, but the facts denote otherwise. *Hildegarde's* best five consecutive days netted her only 1123 miles; *Fleur de Lys'* best run in a like interval was 1194 miles, and *Thistle's* was 1195 miles.

In the meantime the 116-ton schooner *Endymion* (100 feet water line) sailed an unequivocally southerly course and finished ahead of the yachts just mentioned, being beaten only by *Atlantic*, by the 134-ton schooner *Hamburg*, and by the full-rigged ship *Valhalla*, all of which sought the "strong magic" of the Gulf Stream. *Endymion's* best five days gave her 1341 miles (at an average speed of 11.4 knots) and her showing in the race would have been better if she, alone among all her competitors, hadn't dropped into one of those Gulf Stream calms that are dreaded by all who take the southerly route. In the 24 hours immediately preceding her big spurt, she made good only 59 miles, while two other yachts, one six miles south and the other 24 miles north, were overtaking her and turning in runs of 184 and 117 miles, respectively.

Endymion it was, by the way, which in June, 1900, cruised across the ocean by the southern route in 12 days and 16 hours from Sandy Hook Lightship to Bishop Rock. Her almost identical course in the race of 1905 took her between the same points in 13 days and 22½ hours. Dipping again into the race of 1866 for the sake of a comparison, the record for the northern course between Sandy Hook and the Bishops is that established by *Henrietta* — 13 days and 6 hours.

I stressed these points in conversation with Rod Stephens, who was mate of *Dorade* when she won the Plymouth race of 1931, who commanded the same little ship when she sailed to Norway in 1933, and who is a staunch proponent of the northerly route, and he made a pertinent comment. There is no proof, said Rod, that *Endymion* would not have done still better in 1905 if she had crossed the Banks; likewise, there is no proof that if she had been in existence in 1866 and had raced the southern route she would not have been defeated by *Henrietta*.

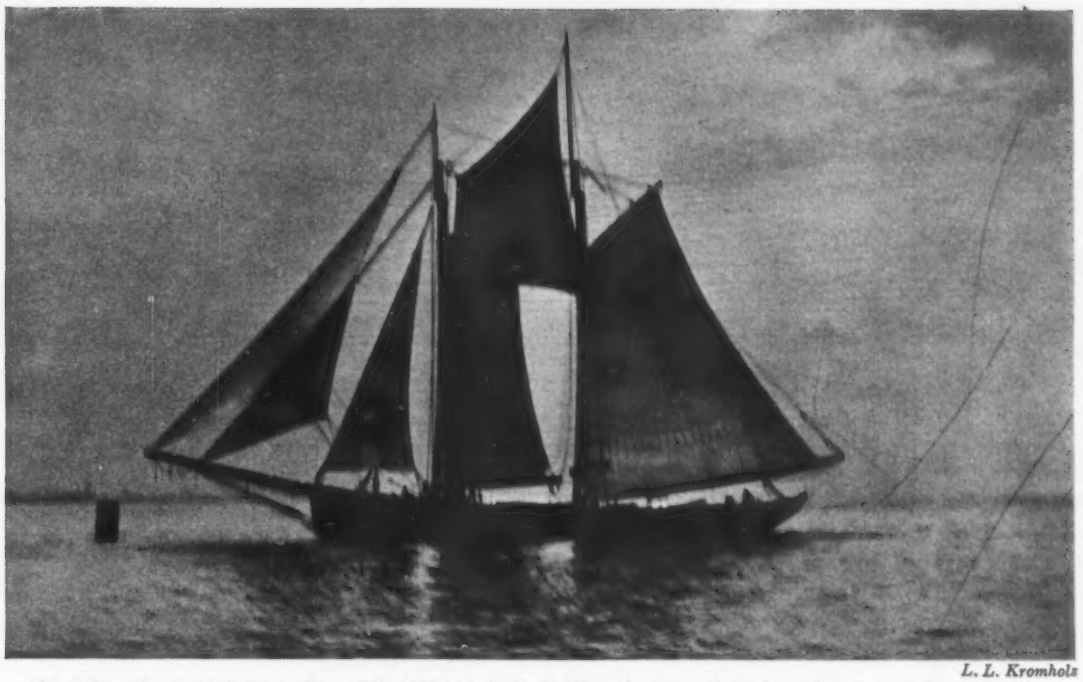
I acknowledge the cogency of Rod's remark and add in his behalf that there is every proof that *Dorade*, choosing the northern route in 1931, found better wind up there and roundly defeated the yachts that crossed to south'ard of her. Yet the fact remains that, with the exception of *Henrietta's*, *Vesta's*, and *Dorade's*, all relatively fast west-east racing passages have been made along the southerly route. The *Atlantic's* all-time records of 11 days 16 hours and 21 minutes to the Bishops and of 12 days and 4 hours to the Lizard, 49 miles beyond, were so made.

The Spanish Race of 1928

For this particular inquiry the records of the 1928 race to Spain offer little information that is valuable. Santander, the objective in that event, is situated down between the forty-third and the forty-fourth parallels, and there was no reason for any competitor to skirt the Nova Scotian coast in making his easting. It is the fact, however, that the *Pinta*, eschewing the great circle route as far as Longitude 52, and seeking the Gulf Stream's magic, sailed as far in the first six days of the race as *Niña* sailed in the first seven days, *Niña's* course taking her 60 miles or so to northward of *Pinta*. The lead piled up by *Pinta* in this period permitted her to arrive off Coruña a full day ahead of *Niña*, although from the landfall to the finish *Niña's* sailing ability in light head winds was such that she crossed the line nearly thirty hours in the lead.

In the courses sailed by yachts in the large class in the race of 1928 I can find equally little that bears upon the point. Although *Elena* sailed the most southerly course and won, her southing was gained in the tactical (and rather footless) process of beating to leeward. *Atlantic*, which finished second, employed the same tactics, both yachts adding greatly to their mileage but picking up but little on the three-masted schooner *Guinevere* which sailed steadily along the fortieth parallel. *Zodiac* steered the most northerly course and finished behind these three, but again I feel that the

(*Continued on page 128*)



L. L. Kromholz

The pilot schooner "Ambrose Snow," built by C. & R. Poillon, was one of the few schooners retained in service after the New York and New Jersey pilots united in 1895. Photograph taken in the Lower Bay in 1908

American Pilot Boats

Part II—The New York Model

By H. I. CHAPELLE

IT IS COMMONLY supposed that New York's bid for nautical fame during the days of sailing ships rests on her grand packets and swift clipper ships. Impressed though one must be by the splendor of the packets and the size, beauty and speed of the lovely — though short lived — clipper ships, it was the clean lined pilot schooners that brought recognition at home and abroad to the shipbuilders of New York, New Jersey and Long Island.

Long before the days of the packets and clipper ships, and long before the yacht *America*, that remarkable development of the pilot schooner, attracted popular attention, the pilot boats used off Sandy Hook were known to naval architects in England and on the Continent as remarkably fast, seaworthy and handsome vessels. Time and again foreign designers attempted to duplicate in their own craft the good qualities of these slippery schooners — but usually with little success.

A direct descendant of the famous Baltimore Clippers, by way of the "Virginia Model" of schooner, the Sandy Hook pilot schooners gradually developed certain characteristics of their own, due to the requirements of their service and the natural evolution of ideas on the part of their builders. For the greater part of their existence as a type, the Sandy Hook pilot schooners exhibited the basic principles of design employed in the old Baltimore "heelers." The modifications came into use gradually, though eventually the changes became so extensive and far-reaching that little of the older type could be distinguished. However, revivals of the old and tried models occurred right up to the end of the existence of the type, whenever pilots became tired of experimenting with new models.

Before attempting to trace the evolution of the Sandy Hook pilot schooners, it will be well to give a hasty picture of the conditions and requirements of the service in which these boats were employed. The entrance to New York Harbor was much more difficult in the old days than it is now; until comparatively recent times the channels were so poorly marked and shifted so much with each gale that local knowledge was necessary even in comparatively small vessels seeking the port. Due to the fierce competition among the pilot companies, brought about by their numbers (which, in turn, was the result of the steadily increasing commerce of the port), the schooners were forced to work well out at sea, far from shelter. Except within the harbor itself, the only shelter available to pilot boats caught inshore was the New Jersey shore close to the Hook. The weather off the Hook leaves much to be desired in the winter and the tail-end of a West Indian hurricane sometimes makes things interesting in summer or fall. With the whole sweep of the Atlantic to windward, it is natural that a pilot schooner would have to prove her seaworthiness in such gales.

The boats were owned by companies or groups of pilots, though occasionally one might be owned by an individual. In early days, anyone so desiring could call himself a pilot — with easily imagined results. Then followed many attempts to limit and supervise the pilots, as well as to establish requirements for their training. It is not my purpose to give an account of the difficulties of the pilots in obtaining a satisfactory method of controlling and safeguarding their business nor of the abuses with which they had to contend. There is an excellent picture of this feature in "From Sandy Hook To 62°" by Charles E. Russell (The Century Co., 1929). Suffice it to say, conditions were such that there was the keenest competition, not only between the pilots themselves, but between the pilot companies of New York and New Jersey as well. This put an unusually high premium on speed in their schooners.

The greater part of the development of the Sandy Hook pilot schooner, as a type, may be said to have taken place between 1800 and 1860; the rise of the pilot boat kept pace

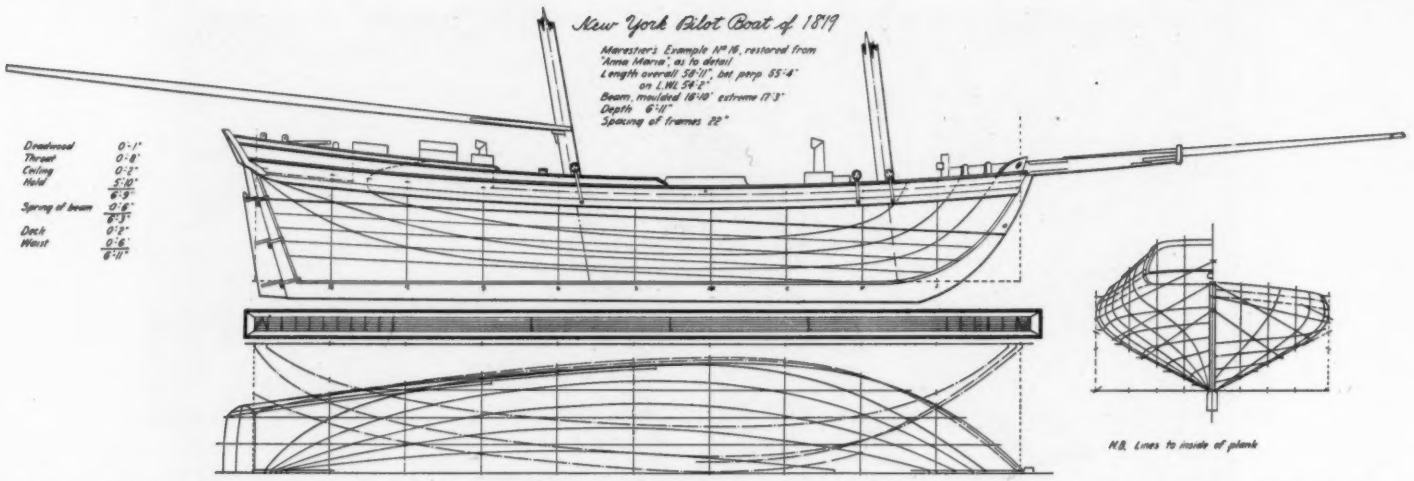


Figure 1. Though built on the Chesapeake and showing the influence of the Baltimore Clipper, this boat exemplifies the "New York Model" of the day

with the increasing importance of New York as a port. The boats used after the Revolution and until 1800 seem to have been similar to the early "Virginia Model" in nearly every respect. However, between 1800 and 1812 there was a gradual change in design, in the direction of greater depth and seaworthiness. This was brought about, perhaps, by the pilots going farther to sea as a result of growing competition.

By 1812, then, the Sandy Hook pilot schooners may be said to have become a particular type, and the *Anna Maria*, whose plans were published in YACHTING (September, 1934), represents the popular model of that period. She seems to be a good example of her class in design, rig and dimensions. She also illustrates the fact that the "New York Model" of pilot boat was known abroad at this early date, for this schooner was taken into the Royal Navy as a tender, a service requiring great speed. It was during this period, also, that the deck arrangement became nearly standardized, though there was variation in hull form and appearance.

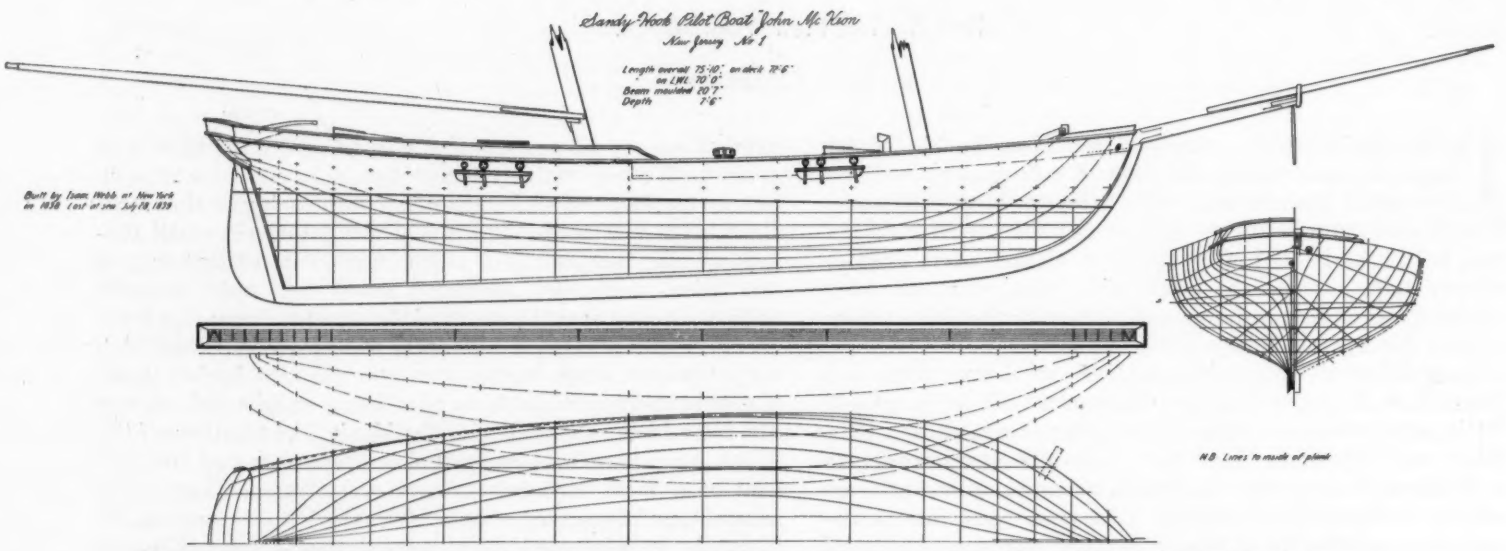

Sandy Hook Pilot Boat "John Mc Keon"
New Jersey No. 1
Length overall 75'-10", on deck 71'-6"
on L.W.L. 70'-0"
Beam moulded 20'-7"
Depth 7'-6"
Built by Isaac Webb at New York
in 1850 Lost at sea July 18, 1879
N.B. Lines to inside of plank

Figure 2. The "John McKeon" was a fast and powerful vessel of large displacement and capacity. She had a short and tragic career

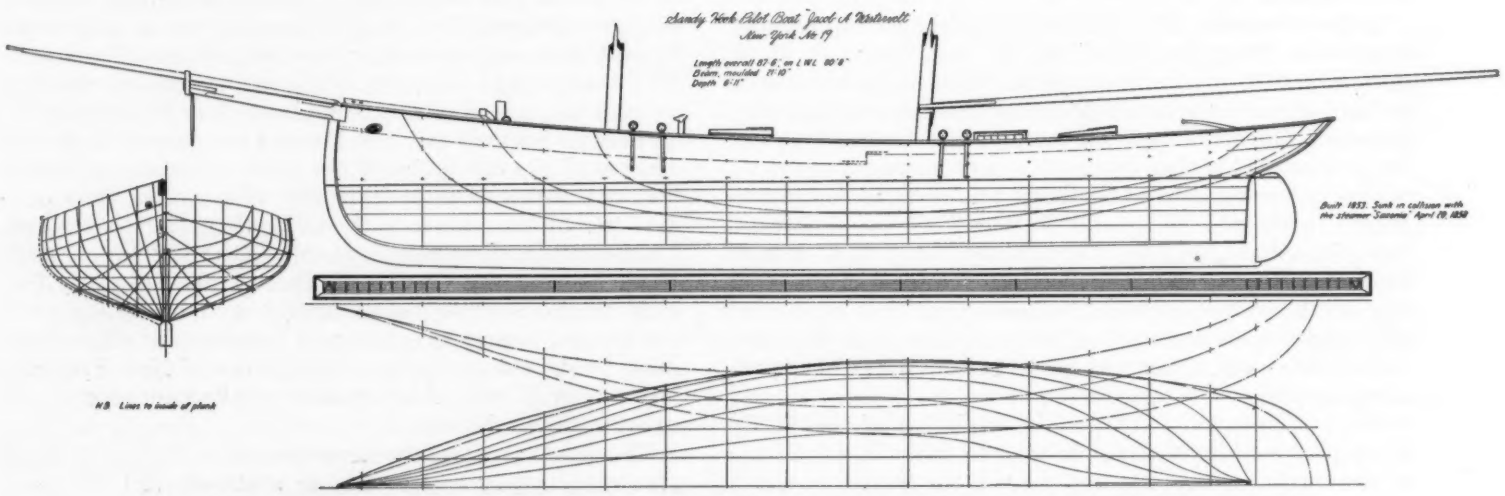

Sandy Hook Pilot Boat "Jacob A. Westervelt"
New York No. 19
Length overall 87'-6", on L.W.L. 80'-6"
Beam, moulded 21'-10"
Depth 9'-11"
Built 1853. Sunk in collision with
the steamer "Tacoma" April 19, 1858
N.B. Lines to inside of plank

Figure 3. The "Westervelt," with her shoal hull and long, hollow entrance and flat run, had a reputation for great speed

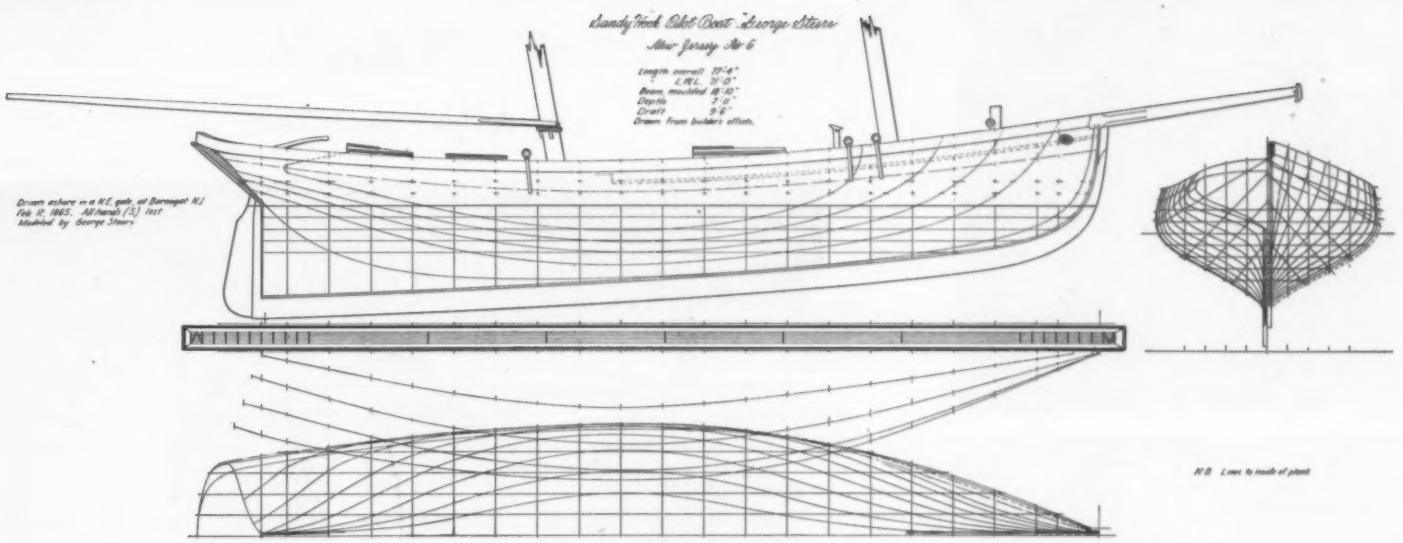

Sandy Hook Pilot Boat "George Steers"
Length overall 77'-4"
L.W.L. 71'-0"
Beam, moulded 18'-10"
Depth 7'-0"
Draft 9'-6"
Drawn from builders offsets.
Driven ashore in a N.E. gale, at Barnegat N.J. Feb 12, 1865. All hands (3) lost
Modeled by George Steers
N.B. Lines to inside of plank

Figure 4. This beautifully modeled schooner, from the board of the noted designer of the famous "America," is an example of George Steers' mature practice

As a second example, we have a somewhat later and smaller pilot schooner of the same general model (Marestier's example No. 16), shown in Fig. 1. Compared with the *Anna Maria*, this schooner is not only smaller but a little deeper in proportion to length. The most marked feature in her design is probably the strong tumble home amidships. Whether this was a popular fad at the time she was building or whether she was an exception in this respect, cannot be answered since we have so few examples of her contemporaries. As Marestier found her building some time in 1820, she was possibly designed in 1819. I have found two of the original drafts copied by Marestier; they are dated in the period of 1815 to 1819, so it is possible to place a fairly accurate date on our pilot boat. Unfortunately, Marestier did not show any detail, and the deck arrangement had to be restored by reference to the *Anna Maria*, so that her appearance might be better visualized.

This schooner shows another feature of design: the floors are carried well fore and aft, as is indicated by the buttock lines, yet the ends are quite sharp and reasonably well formed, considering the length of the hull. This gave good capacity yet did not prevent speed unless the hull was too deep and the deadrise insufficient. This principle of design must have increased stability and aided in preventing excessive pitching; it can often be seen in the plans of American schooners of this date. Such schooners as this one and the *Anna Maria*, as well as the pilot schooner of about 1830, also published in the September, 1934, issue of YACHTING, illustrate the similarity in looks and model of pilot schooners during the years covered by their dates.

As was pointed out in the article on the "Virginia Model," the size of pilot schooners was fixed by the demands of their service, and the Sandy Hook schooners were no exception. As their cruising radius increased, so did their size. After 1830 the pilot schooners became larger, for this reason, and became useful for work other than that for which they were intended. Take, for instance, the schooner *Independence*. This large pilot boat was purchased by the U. S. Navy at New York in 1838 and was fitted out as a tender to the larger vessels employed in the famous Wilkes Expedition (sent around the world as an exploring adventure) along with another schooner of the same type, the *Sea Gull*. The *Sea Gull* was lost with all hands off "Cape Stiff," but the *Independence*, under her naval name of *Flying Fish*, went out to the East Indies, where she was sold. Under the name of *Spec* she became a notorious opium clipper and China coaster. Her fascinating history is given in full, along with

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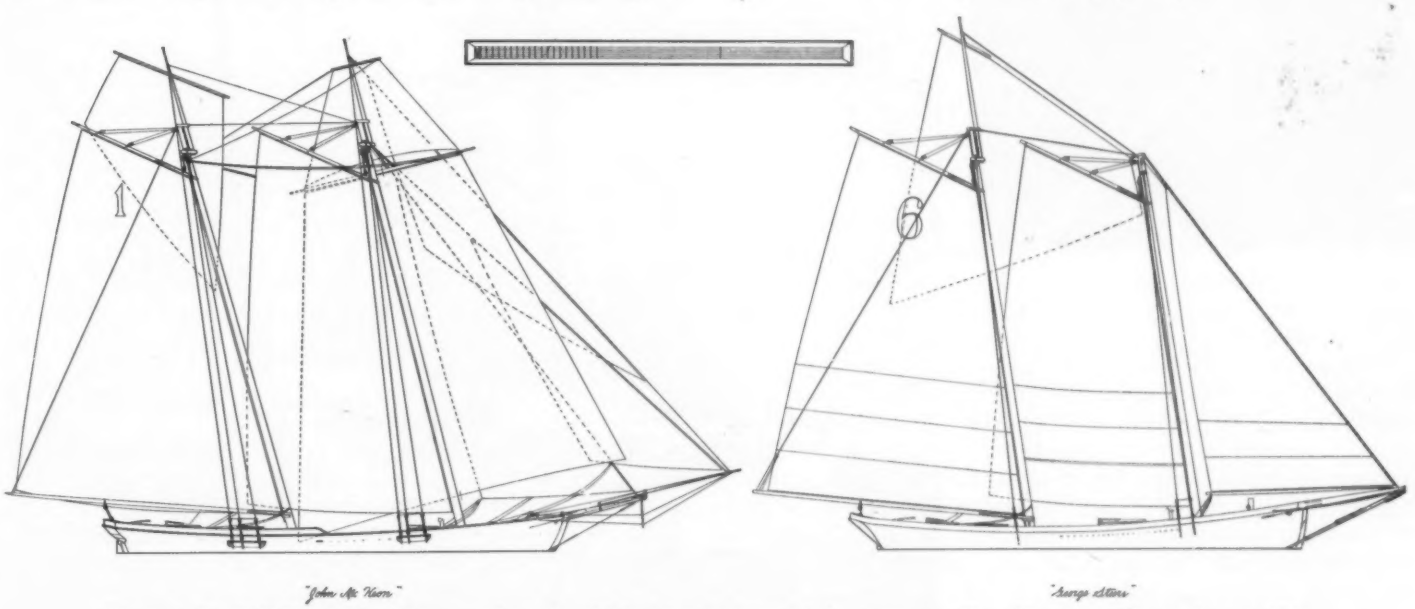
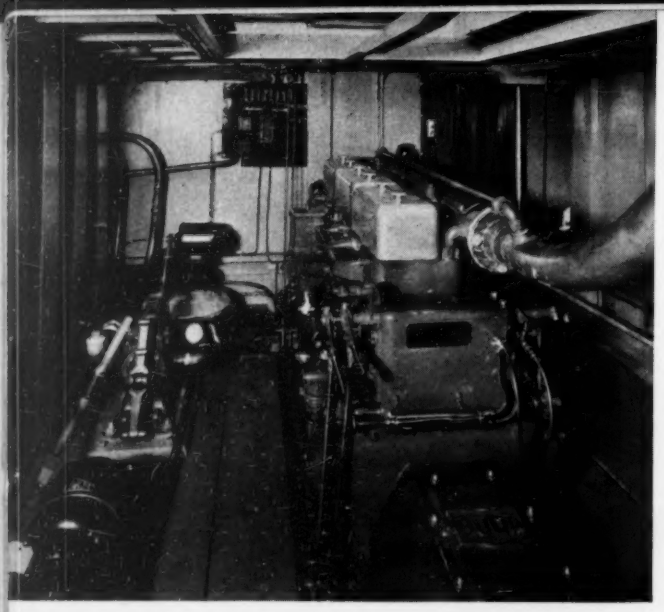
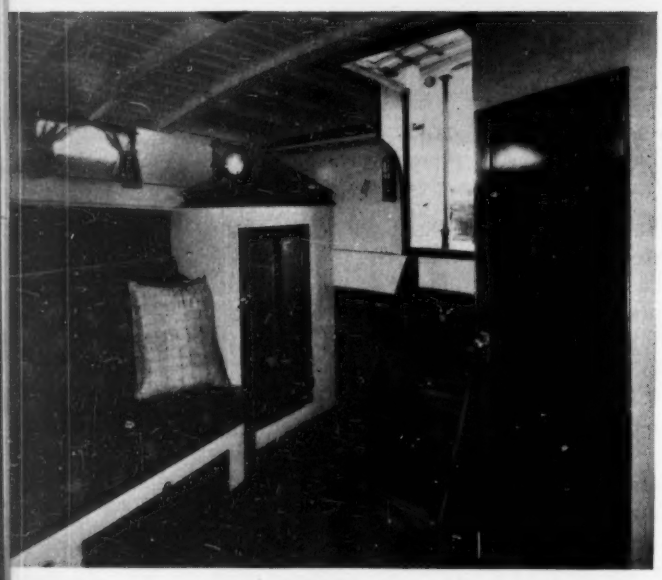
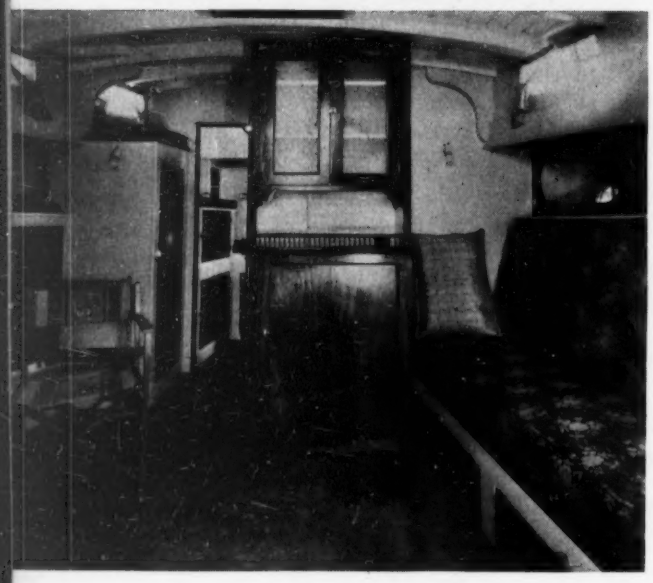


Figure 5. The "McKeon" carried a tremendous rig, with long lower masts and short topmasts. Her odd gaff topsail was characteristic of the period. The "Steers" is shown with a "baldheaded" rig but with plenty of canvas. Note the club in the head of her "fisherman"







"Libra"

A Husky Motor Ketch

"Libra" was built last season for Graham C. Thomson of Greenwich, Conn., from designs by William H. Hand, Jr. She is 47' 9" over all, 45' 0" on the water line, 13' 3" beam, and 5' 0" draft. Above is the bridge deck, and to the left are views of the main cabin and the engine room, with her 125 hp. reduction gear Buda Diesel

Photos by M. Rosenfeld

All Ready For Spring Painting and Varnishing!

By

SAMUEL WETHERILL

PRING is here, mates, the robins are chirping, and it's high time to strip the cover off the old hooker and start in slicking her up for the coming season. Just as last year, you're going to do a lot of your own work, with the help of a few friends — when and if they show up for work. So let's see what there is to be done, and pass the word along to the fellows who are always willing to learn a few tricks which others have learned from the book of experience.

The first thing which strikes you when you take off the winter cover is the fact that the bright work looks pretty seedy. There's nothing which makes a boat look as sloppy as bright work in bad shape, and nothing which brightens her up more than the same bright work after it has had a thorough overhaul. So let's get busy.

If your bright work is in really bad shape — thick, discolored varnish, nicks and scratches — then get busy with paint remover and begin all over with the bare wood. A cream remover is best — it doesn't dry as quickly as the liquid variety, and doesn't run when applied to vertical surfaces. Don't be in a hurry. Let the remover stay on until it has had a chance to do its work. Put on several coats. If you take your time, you can peel it right off with a putty knife, using a scraper, perhaps, where there are nicks or bruises.

Now get busy with No. 1 sandpaper. Do a real job with it — preparation of the surface is more than half the battle. After doing a job with the No. 1 sandpaper, go over the surface again with No. 0 sandpaper. Clean the surface thoroughly with a dry brush, then apply your first coat of varnish.

Use plenty of varnish for this first coat. The bare wood will soak it right up. When dry, sand well with No. 1 sandpaper — the varnish will raise the grain of the wood, and you want to get the surface nice and smooth for the finishing coats. Then put on two or more coats, allowing each coat to dry thoroughly, and sanding lightly between coats with No. 0 sandpaper. Some people consider three coats sufficient on bare wood. Less than three coats isn't even a passable job. Four or even five coats will make a far more lasting, durable finish.

Good, old-fashioned spar varnish is usually recommended by the varnish people for the most durable finish. But spar varnish takes an awfully long time to dry — a bit of wind will sprinkle it with dust, and a spring rain will just about ruin it. Of course, if you're working under cover, fine. If not, better stick to the four-hour, quick-drying variety — it will give good results when applied properly.

Now, if your bright work has "stood up" fairly well during the winter, and the varnish isn't thick or discolored, you won't have to take it all off with remover and start on bare wood. Wash off with a fairly strong solution of any good washing powder — this will not only clean off the dirt but will tend to soften up the varnish so that the sandpaper can get a grip on it. Then rub thoroughly with No. 2 sandpaper, and finish up with No. 1. Clean thoroughly with a dry brush, and apply one, two or three coats of varnish, letting each coat dry, of course, and sanding lightly between coats. My advice is to do a real job in the spring, so you won't have to lose a week-end during the summer to brighten her up.

Varnishes are made from both natural and synthetic gums. Either variety will give good results, provided you buy a standard brand with a reputation. Beware of cheap varnishes. They'll almost invariably give cheap results, and all your hard, painstaking efforts will be discounted.

Let's tackle the deck next. There are all kinds, canvased, natural wood, varnished, painted, and so on.

If you have a canvased deck, and it is in good shape, a single coat of good deck paint will do to start the season with. If the paint is fairly thick, and a bit cracked, give it a coat of flat paint before applying the deck paint — the flat priming coat will work into the cracks and help fill them up, whereas the deck paint is apt to "bridge" the cracks. If the old paint is very thick, and criss-crossed with deep cracks, you are up against a hard proposition. You can get it off with paint remover, though it will be a tough job. Sometimes you can get fairly good results by using enough remover to get off two or three of the surface coats. If the canvas itself is cracked, you need a new canvas deck.

Bright decks are usually of white pine, cedar, or teak. Sometimes they get to leaking. If yours are that way, have them examined by an expert. Perhaps a little judicious caulking is all that is necessary. If the caulking is O. K., fill an ordinary oil can with linseed oil, and run the oil in all the deck seams. The oil will swell the wood, and won't dry out for many a day.

Varnished decks look pretty but are as slippery as a skating rink when wet. By using a little powdered pumice in the varnish a lot of this slipperiness will disappear, although it is apt to kill a bit of the high gloss.

If your decks are painted, clean off with washing powder, sand thoroughly, and apply one or two coats of good deck paint. A plan followed by many is to put on a single coat in the spring, and another in mid-season, after the spring coat has become a bit dull, scratched, or otherwise marred.

Topsides come next. Wash off thoroughly. Then sand thoroughly, with No. 1 or No. 2 sandpaper. Fill up any indentations or blister marks with putty — half white lead and half whiting is the most popular putty, though there are other good mixtures. Give her a coat of flat paint, let it dry and finish up with a coat of your favorite enamel, gloss, or semi-gloss paint.

The bottom is all-important. The cruising man is primarily concerned with a reasonably smooth, highly anti-fouling bottom. The racing man wants a hard, super-smooth bottom, and cares little about anti-fouling protection, as frequent haul-outs of racing craft keep off the grass and barnacles.

Sand the bottom well, filling seams, dents, etc., with putty. If there is still a reasonable amount of paint on the bottom, apply your anti-fouling paint direct. Two coats are better than one. If, after sanding, you are down to bare wood in places, give her a good coat of red lead and oil as a priming coat. Let it dry for at least a week — if you don't, the oil will work through your anti-fouling paint and the good ship will foul quickly — barnacles and weeds simply dote on linseed oil for breakfast, dinner and supper.

There are all kinds of anti-fouling paints — copper paints, bronze paints, and other varieties. Some of the standard brands of cheaper copper paints are really very good for anti-fouling properties, though they do not give the smoothest surface. The costlier paints are generally smoother and have more poisons in them. It's the old story — you get just about what you pay for.

George H. Davis Studio

Preparing the surface before painting is more than half the battle

Everything is sacrificed to smoothness and slipperiness in a racing bottom. The paint used must be very hard, to stand rubbing. A good racing bottom should be built up during the winter — numerous coats of paint, long drying periods for each coat, to ensure hardness, and plenty of sanding between coats. Wrap the sandpaper around a block of cork or wood, to take down the high spots. For a superfine finish, sand the final coat lightly with very fine sandpaper. Then polish with powdered pumice and water, or rotten stone and oil. Use a felt pad, or soft, folded rag — if you do a real job, your arms and shoulders will ache for weeks.

Irregularities in lead or iron keels should be filled with "trowel cement," applied with a broad putty knife. Let it dry hard, then sand smooth. Copper or bronze paint can be applied direct to a lead keel — but not to an iron one. Copper and iron fight in salt water, and bad corrosion, or electrolysis, is the result — most of the "pock marks" one sees in iron keels are caused this way. Give the iron keel one or two coats of red lead and linseed oil. Allow a week for drying before applying the anti-fouling paint.

Racing bottoms should be hard, dry and rubbed before launching. Just the opposite with most of the real anti-fouling paints — launch immediately after applying the final coat so that the poisonous vehicle in the paint will not have a chance to evaporate and lose its anti-fouling properties.

If your spars are varnished, proceed as you would with any other varnished surface. If they are painted, follow the same procedure as you would on any painted surface. Deck paint generally makes fine spar paint.

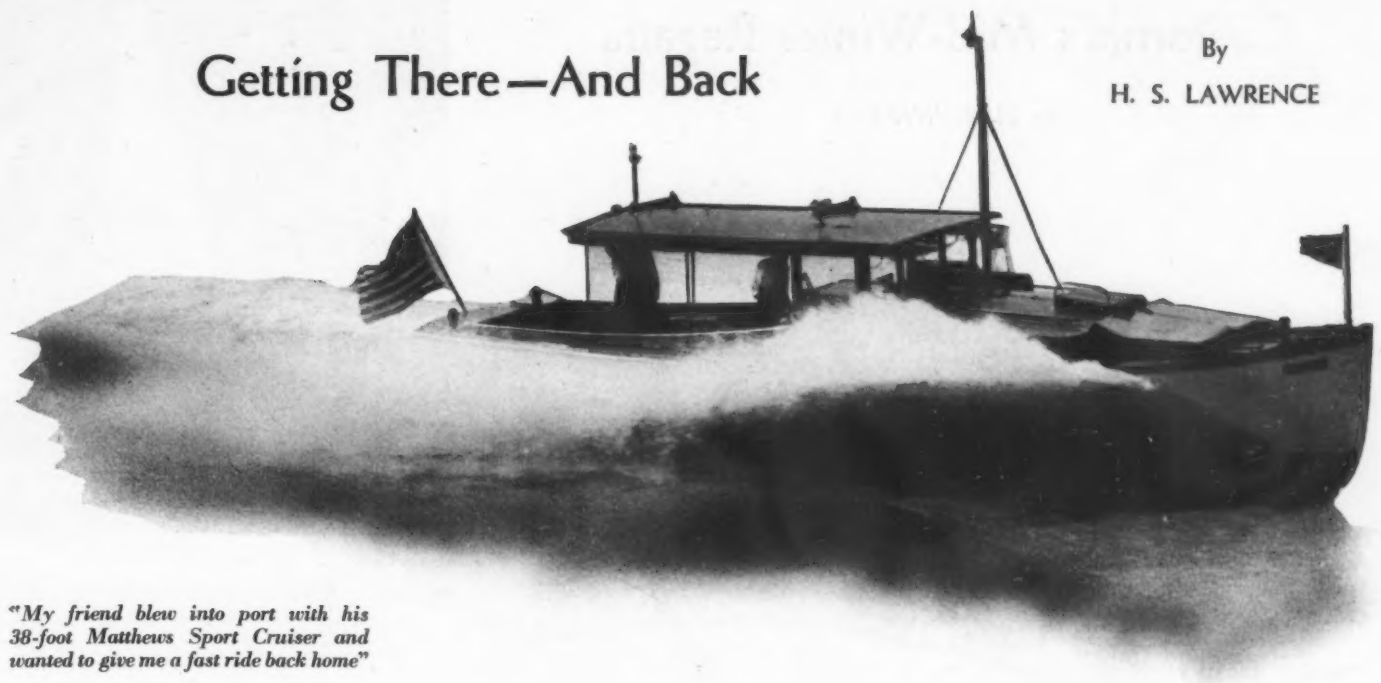
If bubbles arise when you are putting on the final coat of paint or varnish, a few long, light strokes of the brush will remove them.

Many people have difficulty doing a good varnish or enamel job — the surface, when dry, feels as though sand has been sprinkled on it. This effect may be produced by one or more things, as follows: (1) Surface improperly cleaned off — dirt gets in varnish and sticks to brush; (2) dirty brush; (3) scum or dirt in paint or varnish — filter it through cheesecloth or a clean rag; (4) dust or dirt from the atmosphere, even on a windless day, or even indoors. Steer clear of these troubles and the quality of your finished job will improve tremendously.

(Continued on page 125)

Getting There—And Back

By
H. S. LAWRENCE



"My friend blew into port with his 38-foot Matthews Sport Cruiser and wanted to give me a fast ride back home"

PERHAPS the most trying experience I can recall in a long yachting career that covers every kind of cruising, from short coastwise runs to long offshore voyages, occurred a few years ago, not through stress of weather, "act of God or the public enemy," collision, or the various hazards usually connected with seafaring, but right here on our coast, within a few miles of port and on a summer day's run that should have been completed between dawn and darkness. And it was all due to inadequate and faulty navigating equipment that left us running blind in a sudden fog that blew in over sea and ship on the wings of a dying sou'wester and blotted out the coast as if it had never been there at all.

It happened in this way. I had taken a cruise in an auxiliary sloop from the western end of Long Island Sound down to Nantucket. In spite of the short distance, less than 200 nautical miles, it had taken us six days to make the run, due to the persistence of light head winds, the lure of several ports on the way, and the desire to snug down each night for rest and recreation. After all, it was the way to get the most out of cruising. We were in no hurry to push on in order to reach our objective any earlier, and the 35 or 40 miles a day we could do between breakfast and supper were enough. But soon after our arrival at hospitable Nantucket my time was up and, with a shift of wind from the persistent easterlies of the passage out to equally persistent airs from the western quadrant, I had to figure on some quicker means of getting back to the worries of an office desk than a sailing yacht offered.

This was the situation when a friend blew into port with his 38-foot Matthews sport cruiser and asked me if I wanted to go back with him the next day. Eighteen statute miles (about 15 nautical) an hour she'd make, and he planned to get out early in the morning and promised to land me in Greenwich, Conn., by dinner time. Twelve hours against the six days we'd spent coming down. It was too good a chance to lose and I jumped at it. As it turned out, it didn't prove quite as easy as we had figured, but that wasn't the fault of the boat — she would have done it if we'd been able to let her do her stuff.

About seven the next morning my friend was alongside our sloop with his fast stepper. I transferred my dunnage to her, and a few minutes later we were off. Once clear of the breakwater, we set a course for Cross Rip Lightship and stepped her up to her cruising speed of fifteen knots. She settled into her stride easily, the engine purring rhythmically without a skip or break under its hatch in the cockpit, and I took over the wheel while the skipper rustled some breakfast, as all good skippers should — course NNW to Tuckernuck Shoal bell buoy.

An early summer morning's haze covered the sea and we soon dropped the land, some fitful catspaws from the northward dotting the glaze of sea here and there with darker spots.

After getting her nicely settled on the course, so that only a fraction of an inch of wheel would keep her there, my gaze left the compass card for a moment as I took a look around the horizon. When it came back to the card I gave a jump; instead of the NNW point cutting the lubber line, we were heading E x N. Surely we hadn't had time to swing through such an arc in the moment my eyes had been off the compass, and a hasty glance aft showed the wake pointing out straight astern where Nantucket harbor entrance was lost in the haze.

"What's wrong with this damned compass?" I yelled below to the skipper, out of sight in the tiny galley.

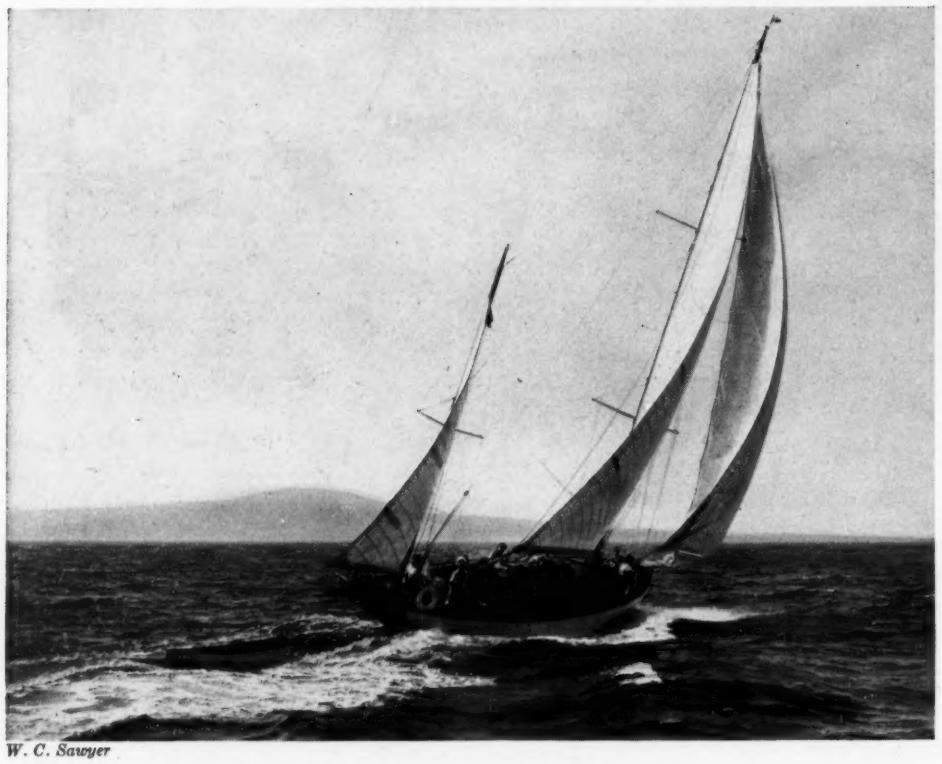
"Oh, I forgot to tell you," he said. "It jumped all about coming up here, and I couldn't make my landfalls accurately. In fact, if the weather hadn't been clear all the way I'd never have found the place. Never acted like that before. I put it down to the vibration."

I whistled. Looking at the catspaws on the water, I could see that we were still heading into the wind, and off to starboard I could just make out the loom of Great Point. We were evidently heading about right. Besides, the haze seemed to be burning away, and I let her go as she was, hoping the compass would come back to magnetic north before we had to change course at the bell buoy, which must now be only a mile or so ahead. Intent on keeping a straight wake streaming astern, I soon heard the clang of the bell and veered over to pass it close aboard. The swing started the compass card, but this time it swung as far the other way and finally settled on W. This was getting on my nerves, and I looked about for some iron or steel that might be affecting it, but could find nothing that could account for its behavior. It was well above the plane of the engine.

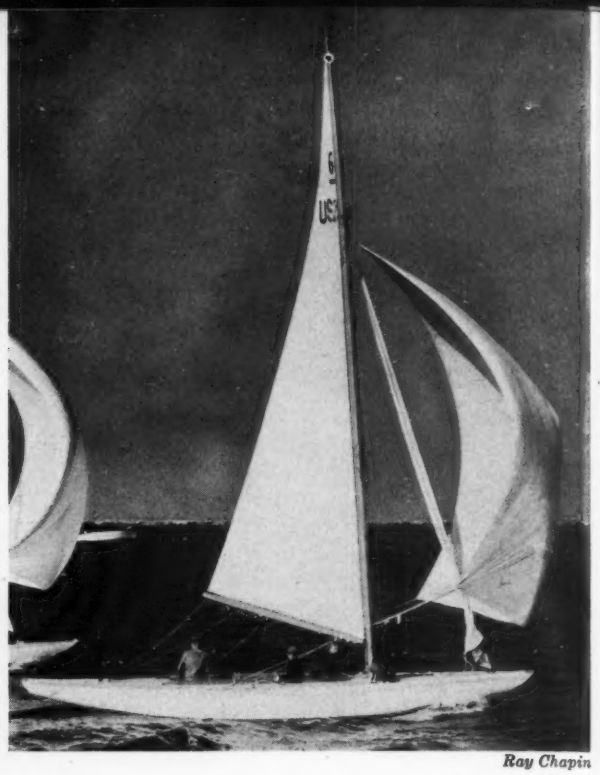
(*Continued on page 126*)

California's Mid-Winter Regatta

By H. B. WARREN



W. C. Sawyer



Ray Chapin

With spinnaker ballooning, the Six-Metre "Lanai," of the Los Angeles Yacht Club, begins the down wind leg. She placed third in the series

Left. The Wilbur May Perpetual Trophy, most coveted prize in the 45-Foot Class, was won by Richard Schayer's yawl "Cheerio II." Fifteen cruisers were entered for this series

YACHTSMEN of Southern California had been looking forward to the Mid-Winter Regatta to settle the Big Argument, but when the racing was all over the whole thing broke out more furiously than ever.

This argument had its beginning in the article published in YACHTING several months ago which gave a suggested list of the ten best skippers in America. Of course, we couldn't place in that contest, but the article did inspire half a dozen conflicting lists of the ten best skippers in Southern California.

Now that the smoke has cleared away, certain skippers seem to have realized the fondest hopes of their backers. Chief among these is Donald Douglas, who sailed his *Gallant* to victory in the Six-Metre Class, which always occupies the center of the stage because of its tough battles. He took most of the starts, and on the three days when the breezes were strong enough to make it *Gallant's* weather, she romped home in the lead. In fact, one would have supposed that the doughty Ted Conant was at the helm, as usual.

Then, just as a group of self-appointed experts had decided that Douglas had earned a place among the Big Ten, along comes a dissenter. "How about Al Rogers?" pipes this discordant voice. "He went into the last race with the *Synnove* only a quarter of a point behind the *Gallant.* It's true that he got a poor start, but did you see him walk through the lee of those other boats? Then he climbed right up on the *Gallant's* tail. If he hadn't fouled a mark, he'd have had the series nailed to the mast." Well, then the argument started all over again.

And while we're still on the subject of the "Sixes," young "Bill" Slater didn't do so badly with the old *Lanai* either. He ran a consistent second, but had the poor luck to be disqualified the first day, and that of course ruined his score. Otherwise, he would have been only a fraction of a point behind *Gallant* in the final reckoning. But hitting buoys and being disqualified are as much a part of yacht racing as winning, so William Bartholomae's *Mystery* stepped into the second place these two others might have had.

The first day, February 20th, a rail down breeze greeted the fleet. In the Eight-Metre Class we could tell without looking that Owen Churchill's *Angelita* would show the way, and that's precisely what she did. Pierpont Davis' *Santa Maria* was second, and E. E. Lampton's *Marin* was third. But the next day we'd have gone all wrong if we had shut our eyes and tried to guess the winner. The wind was light and southerly at the start, although it did belatedly switch to the westward and freshen, but not, however, until the race was in the bag. Here were conditions bearing *Marin's* own trade mark, and yet there was *Angelita* crossing *Marin's* bow before the doings were half over. We couldn't understand it until some observant individual cried out that *Marin* was carrying only a moderate overlapper, while the other two had big Genoas. *Santa Maria* was definitely out of the running, owing to a late start, and that on the very day when that mighty headsail of hers, running back to within a couple of feet of her taffrail, might have spelled victory. The third day was like the first, but *Marin* got away with the start, giving Churchill some bad moments before he finally overhauled her, while *Santa Maria* trailed all the way.

The fourth day — well, there was no fourth day. And be it known that there is now a blot on the pure white escutcheon of Southern California's perfect climate, for a slashing nor'wester out of a brilliantly clear sky forced the committee to call everything off for the day. Most of the fleet took one look at the white smother in the outer harbor, made a few rapid calculations about the cost of spars and sails, and powered back to their moorings. It was blowing a steady 45, with puffs as high as 55 to 60.

The last day *Angelita* could have won without sailing. The wind had moderated to a mere 25 or so, but *Angelita* was still in her element. However, she got into a luffing match

Thirteen Stars, among them two international champions, tried their luck. Here is the winner, Glenn Waterhouse's "Three Star Too." Her rival, H. F. Beardslee's 1934 international winner "By-C," took second place

Below. "Santa Maria," owned by Pierpont Davis, which took second place in the Eight-Metre division. Three firsts gave Owen Churchill's "Angelita" a clear win. (Photo by Ray Chapin)

Bottom. "Gallant," sailed by her owner, Donald Douglas, earned top standing in the Six-Metre Class in which close contests are the rule. William Bartholomae's "Mystery" was runner-up. (Photo by W. C. Sawyer)

W. C. Sawyer

with *Marin* on the first leg, while *Santa Maria* scuttled away into a winning lead, so there was a *little* variety in that class after all. The final standing was *Angelita, Santa Maria, Marin.*

The "Sixes," as previously stated, provided equally one-sided racing, *Gallant* winning three out of four. The reason that she had less than a four-point lead was the soft weather of the second day. *Gallant* can't make it in that stuff, so she dropped to fifth, while her heavy weather rival *Synnove*, sailed that one day by Ted Geary, surprised the dopesters with a decisive win. The way of it was this. The second leg was a beat, *Synnove* turning the mark in the ruck. Most of the "Sixes" stood offshore, while Geary went up the coast. They didn't bother to cover that old barge on a day like that. An unsuspected current gave *Synnove* a great lift before anybody realized it, and there was your yacht race.

A fleet of thirteen Stars came out to do battle in this regatta. Among them were two international champions, H. F. ("Hook") Beardslee and Glenn Waterhouse. Hook went after things with a rush, taking the first three contests with the same brand of sailing that won four out of five at the Internationals at San Francisco last September. At that point he looked like a sure winner. Waterhouse had only a second and a third, being tied with Bob Ziegler's *Win-Blu* for second on points. But trouble was lurking just around the corner. On that fateful February 23rd, a day that all good Californians hate to think about, Hook jumped into that maelstrom with his Star where cruising boats feared to tread. There was a snap and the *By-C* was completely divested of her mast. Hook and his crew worked all night installing a new one, so they managed to make the starting line next day. But *By-C* had gotten a nice tow the day before, and decided she'd like to be hauled by the nose once more. The race wasn't fifteen minutes old before her new mast let go. Waterhouse, who hails from San Francisco and therefore was in his element in a 25-miler, grabbed off an easy first and the series with his *Three Star Too.* Beardslee's three firsts were still good for second place, while Ziegler was third, Ed Williams' *Moira* fourth, and Douglas Mackinnon's *Sir Salty* fifth.

In the Common Sense Class, Frank E. Garbutt had no trouble in winning three firsts with his *No. 5* and was about to take the final contest when he split his mainsail. He won, however, with 9¾ points over Paul Lamport's *No. 1*, which had 8, Professor Kellar's *No. 2* bringing up the rear with 5¼ points.

Three of the Skimmers from Alamitos Bay got in commission early for the pre-season battle, Rose Pasel's *Roses* proving the winner. Dick Russell's *Patricia*, for many years almost unbeatable, was second, and Marion Ferguson's *Black Slipper* third.

The "Forty-Fives," those hardy cruisers, came out fifteen strong after the Wilbur May Perpetual Trophy. Three races were scheduled, but only two were sailed for a reason that we will now forget.

(Continued on page 125)

Spring House Cleaning in the Engine Room

By

GEORGE F. CROUCH

NO MATTER whether your boat is a 14-foot "one-lunger" or an 80-foot commuter with a crew of six and 500 big horses eating their heads off, during the summer you have found a thousand and one things which you solemnly swear will be corrected before she goes into the water in the spring. But these resolutions are all too apt to go the way of all good intentions. I have resolved quite as firmly as the most determined among you to find out why my motor thumps and bumps if speeded up wide open for over ten minutes, why she uses twice as much fuel to go ten miles as I was told she would need and why her 25-mile speed is down to eighteen, but still I have done nothing about it. I am talking even more to myself than to the most negligent among you.

Someone else will tell you what to do about your hull, about paint, rig, spars, and sails; my particular subject is the engine installation with its associated units. Simple changes and repairs can be carried out which will make the coming season more enjoyable. In no way do I intend to touch upon the actual job of overhauling the engine, fitting new bearings, putting in new rings, or pistons, not even grinding valves, for these matters have been covered a thousand times and are really the job of a mechanic, to be undertaken only by one competent to do the work without being told how to do it. What I shall suggest is more in the nature of a general inspection, a cleaning and repairing of the mechanical equipment rather than the overhauling of any parts. To cover the subject in a logical manner, I intend to start with the fuel entering the boat and follow through to the thrust given by the propeller.

Fuel tanks should be inspected, then thoroughly cleaned and flushed out. Every well-made tank has a cleaning plug at the low point. This plug should be removed and dirt flushed out. Fuel lines should be disconnected from the tank and flushed out. The amount of dirt, rust, water, and foreign matter which collects in the bottom of a tank after a couple of years of service is amazing. Whenever the boat is pitching and rolling in a rough sea this sediment is stirred up and will clog the fuel line or carburetor at the very moment when a stalled engine may mean a smash up. It always happens at just the wrong time. Therefore be sure that the tank is clean. During the process of cleaning the tank, obey all cautions which have been laid down again and again about the use of uncovered lights and see that these precautions are strictly observed by everyone in, on, or near the boat.

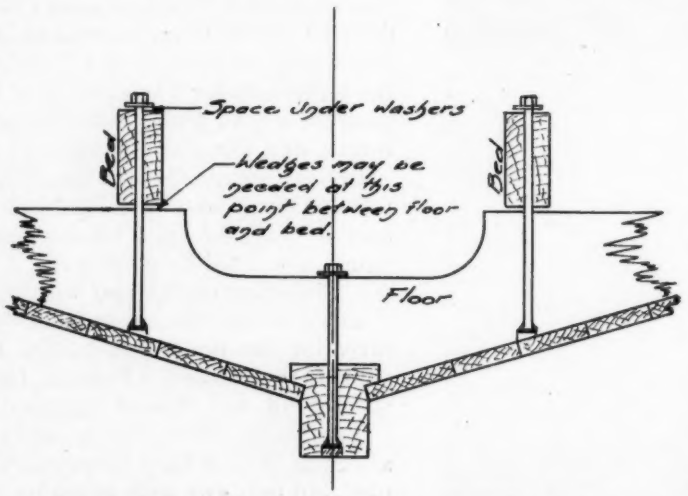
Tank vents should be inspected to see that water on deck or in the form of spray cannot be carried into the tank. If the vents are not high enough above the deck or are improperly located for protection, make suitable changes, which will, of course, be determined by each particular case.

All fuel feed lines and valves should be inspected. It is sometimes surprising how any fuel at all gets through the feed line in many boats, for these lines are almost closed by sharp bends or through damage. If the feed line has been flattened out or badly dented, replace it, and by all means lead it as directly as possible from the tank to the motor. Avoid vertical dips and bends. Do not carry the fuel line down into the bilge but lead it where it can be seen and inspected and where a leak can be detected before it fills the bilge with inflammable vapor.

The screens on fuel strainers should be renewed and cleaned. This very simple procedure seems to be neglected in more than half the installations we have gone over. Make the cleaning of the strainer a regular part of the upkeep. Clean *all* the strainers; there may be a large special strainer, a small one at the fuel pump, with a third at the carburetor. If any one of these strainers clogs up the motor will stall.

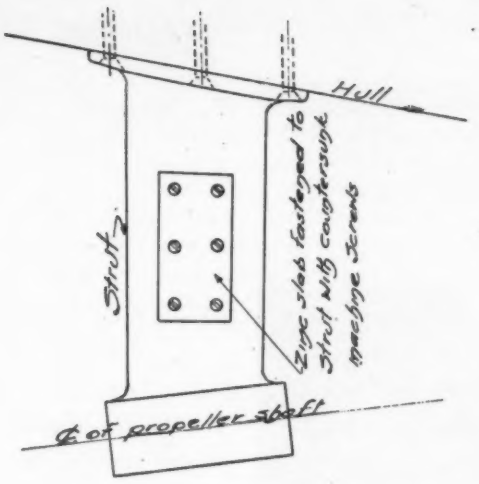
With regard to the carburetor, unless you know something about it, we hesitate to recommend that it be taken apart and yet that is what should be done about once a year. All air-bleeds and gasoline nozzles should be cleaned, all gaskets inspected for tightness, the float needle properly seated and the throttle valve stem inspected to see that there is no excessive wear through which air might enter and cause irregular running when idling. Some motors are furnished with die-cast white metal carburetors. These, unfortunately, corrode rapidly on salt water and are almost useless after a season or two. You cannot expect good results from an old carburetor of this nature. With regard to carburetor adjustment we shall say nothing at all, for that is an entirely different subject and one about which whole volumes have been written. If you feel that your motor is not getting the proper mixture, the thing to do is to call in a carburetor man unless you are an expert yourself.

Lifting the motor out of the hull and giving it a thorough cleaning and a coat of paint outside is not done merely to make it look pretty but is definitely a protection for the motor parts. Particularly is this true of the crankcase. Aluminum crankcases corrode rapidly and must be well protected. Corrosion is always most rapid where the case comes close to a bronze nut on a bolt holding the floor timber to the keel. We can cite many cases in which corrosion went so far as to eat a hole through the base, losing all the oil when the boat was miles from port. Bitumastic paint is decidedly suitable for coating the crankcase and lower part of the reverse gear housing where it comes in contact with salt water in the bilge.



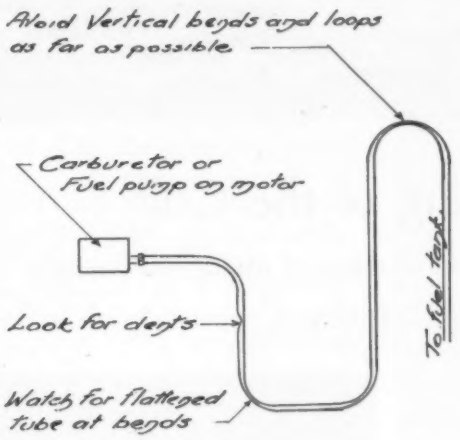
If timbers of engine bed shrink all fastenings should be set up tightly

Motors which are used in some localities accumulate a deposit of sediment or sludge in the water jackets which interferes with proper cooling. Sometimes this can be flushed out by using a hose. More often, however, it is necessary to use some form of chemical solvent — of which there are a number on the market — to loosen this deposit before flushing it out. Cleaning out the water spaces of cylinders



Left. Zinc slabs on the struts will retard corrosion

Below. Fuel lines should be inspected for faults noted in the diagram


Avoid vertical bends and loops as far as possible
Carburetor or Fuel pump on motor
Look for dents
Watch for flattened tube at bends
To fuel tank

and heads about once in every two years is advisable.

Starting with the scoop on the outside of the hull, the entire cooling water line should be inspected. The scoop and strainer should be removed and any accumulation of barnacles, mussels, or other foreign matter cleaned out before they are replaced. In fact, it is a good rule to clean every inlet or outlet passage through the hull before putting the boat into the water, whether these passages are part of the machinery equipment or for toilets, pumps, scuppers, or other purposes. The fastenings at all these outlets should be checked and tightened, for they sometimes corrode rapidly, particularly if the builder has used brass fastenings instead of bronze. The hose leading from the water intake to the water pump on the motor should be renewed if it is old and soft. This hose should be rubber-lined so that no loose fabric flaps can cut off the water supply.

Almost without exception the circulating water pump of the modern motor is a gear pump. When one of the gears in this pump is used to drive the second gear, wear is rapid if there is sand or silt in the water. The pump should be taken apart, inspected for wear and, if necessary, a new pump or new gears should be used. If each gear in the pump is driven by its own shaft, thus preserving a very slight clearance between the teeth of the pumping gears, they will last much longer and will not require renewal as frequently.

If there is evidence of water leaks through gaskets, these parts should be separated and new gaskets fitted. Where the overflow water enters the exhaust pipe, a salt deposit is sometimes formed which may tend to restrict the outlet from the water line and may even be so large as to restrict the exhaust. This is apt to occur where only a part of the cooling water is turned into the exhaust. It is wise, however, to inspect both the water outlet and the exhaust elbow and see that all is clear.

The exhaust line always needs looking after. Too often it is laid out so that there are sharp bends and pockets in which water collects. Check the line and if necessary relocate it so that every inch of it will drain from the motor to the outlet at the transom. Avoid all bends greater than 45° if pipe is used; if the line is of copper tubing, make the bends with a liberal radius. Water drawn up into the exhaust manifold is responsible for most cases of sticking valves and of many broken valve springs. A place where leakage often occurs is through the packing around the exhaust pipe where it passes through the transom. In many boats this is practically at the water line. This packing should be checked, for a leak here may cause a flooded boat.

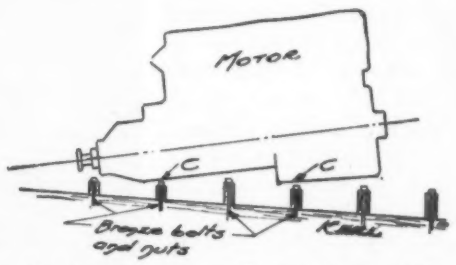
Spark plugs should be taken out. If not badly burned, they may be cleaned and used again after setting the points to the proper gap, which depends on the type of ignition employed — a gap gauge is often furnished as part of the equipment — and also on the compression of the motor and the speed. Your instruction book will tell you the proper gap to use. If there is any doubt about a plug being good, discard it and replace it with a new one, for plugs are often faulty even though they show no breaks in insulation. The new type of sand-blast plug-cleaning device is decidedly effective and is recommended as far better than scraping and washing with gasoline.

Inspect carefully the coupling of the propeller shaft to the engine. More than one boat has lost a propeller and a complete shaft because the set screws were not properly set down in this coupling, and others have had trouble because the keys were allowed to work loose and almost shear through. The propeller shaft should be a light driving fit into this coupling and the key should be snugly fitted. Set screws should be well spotted into the shaft and wired to keep them from backing out. In case the propeller shaft has a taper at the engine coupling these instructions do not apply.

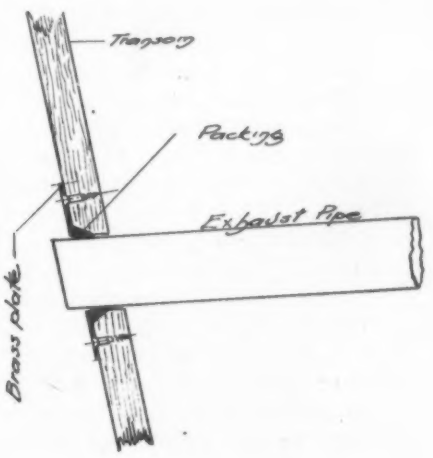
Before setting up this coupling, it is advisable to take the propeller shaft out of the boat at least once every year and note whether or not it is being badly scored in the stuffing box, stern tube bearing, or strut bearing. Sometimes a shaft will be reduced in diameter by a full eighth of an inch at one or all of these points. For small shafts there is no remedy other than renewing the shaft, which should be done if it is badly worn. Larger shafts can be fitted with bronze sleeves and the bearings and stuffing box bored out to accommodate the increased diameter, or the worn parts can be built up by spraying metal upon the shaft and then machining it to the original diameter.

While the shaft is withdrawn, test the bearings with a pair of calipers to see how much they have gone out of round. It may be necessary to renew the babbitt in the bearings if babbitt is used, or to replace bushings of bronze or rubber if the bearings are of that particular type. Occasionally a boat which vibrates badly can be made to run smoothly by installing an extra bearing where the span between bearings is long. On page 50 of YACHTING for April, 1933, I gave a chart showing the maximum distance between bearings for propeller shafts of different diameters. If the span exceed that shown

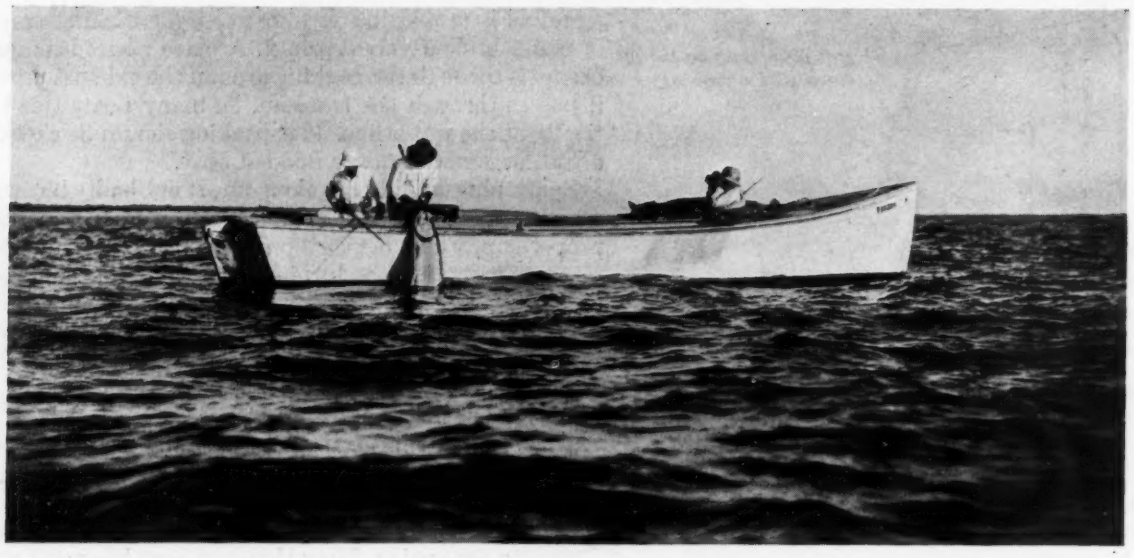
(*Continued on page 122*)



Aluminum bases corrode rapidly at points marked "C" where base is close to a bronze bolt and nut



Right. Leaks are common where exhaust pipe passes through transom unless packing is properly held in place by brass plate



This type of boat, with no deck erections, is particularly favored by the tarpon fisherman

Silver King of the Gulf

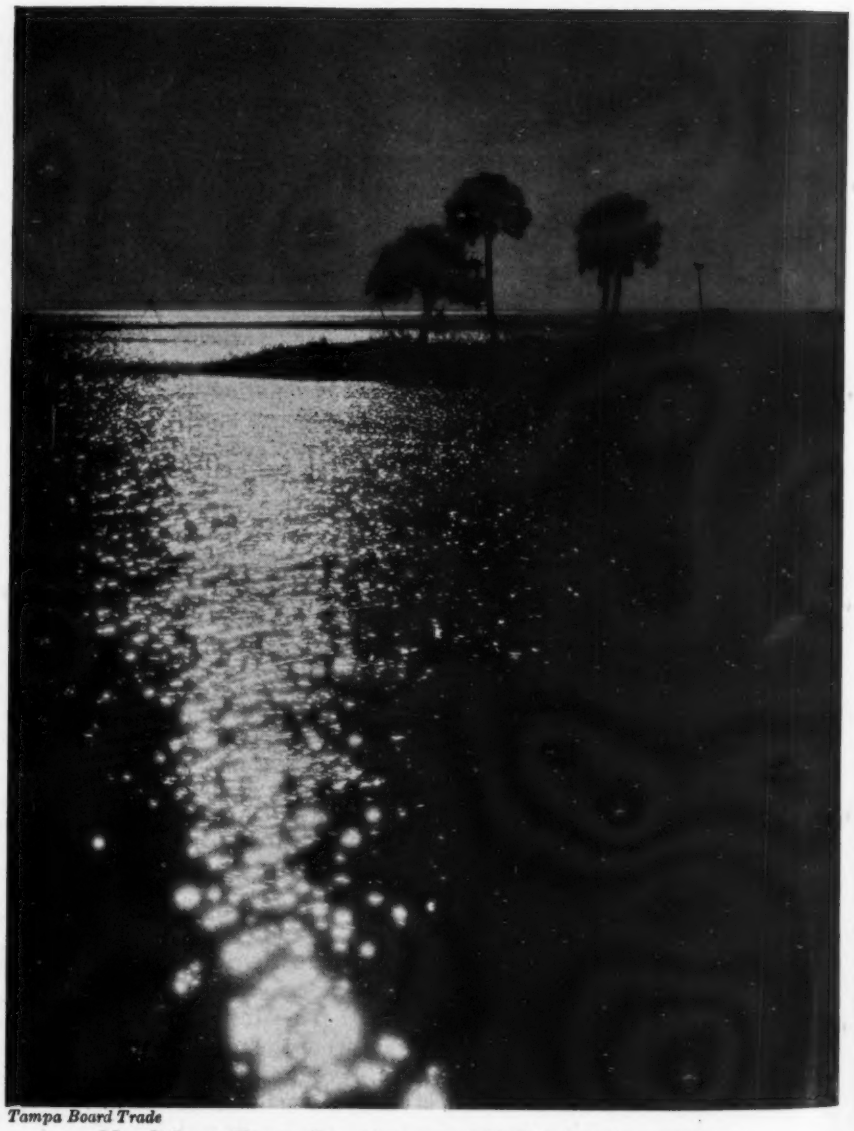
Hunting the Tarpon, an Adversary of Mettle and Strength

By DAVID NEWELL

HE'S a swaggering, rollicking, devil-may-care buckaroo, ready to fight from the time he's large enough to grab a fly. He's a graceful, exuberant, beautiful bit of life when he's a foot long, and he's a graceful, exuberant, beautiful bit of high-powered trouble when he's six feet long. Two pounds or 200 pounds, the tarpon is a fighter from his heart, ready to give you more thrills per second than anything short of an old fashioned falling ladder nightmare!

Unfortunately, perhaps, the tarpon is a warm water fish. He doesn't like the cold and is at his best in the late spring and summer. Because of this fact he is unknown to many winter vacationists in the semi-tropic seas, who must therefore content themselves with Gulf Stream fish such as sailfish, marlin, dolphin, barracuda, and with the sluggish reef fish, amberjack, grouper, and their ilk. Now far be it from me to say anything against old friends of the purple stream, just because I happen to be writing about tarpon. They are warriors all, but the silver king is their equal, and you must know him.

To begin with, you will have to stay in Florida — if Florida it should happen to be — until May or possibly June. Far from being a hardship, this in itself is a treat of the finest sort. I know, for I have spent these spring and early summer months in Florida for the past twenty-five years. April, May, and June are my favorites — for fishing, for fun, for beauty, for weather. Of course, it is possible to catch a few tarpon during the winter months if the angler is able to explore the keys and to poke around in the mouths of the southernmost rivers — Shark River, Harney River, Lostman's River — and even in the rivers farther north. However, this hit-or-miss fishing cannot be classed as tarpon fishing. When I think of tarpon I think of the full moon in June. I think of vast schools of these silvery beauties, rolling lazily or slashing the green water into white foam as they strike savagely through a school of bait. I think of *acres* of fish, of a day's sport when there were ten, twelve, fifteen, twenty strikes and as many fish in the air. There are many such days in May and June. At Boca Grande Pass it is not at all unusual to strike twenty-five fish in a day and to bring eight or ten to the releasing hook — if you are man enough!



Tampa Board Trade

Moonlight on Tampa Bay. As tarpon fishing is done in open waters, Florida's west coast is a favored ground

Naturally, the fishing begins in the keys. In April, the schools of tarpon begin to appear in goodly number. There is excellent fishing along the viaduct and in the nearby channels from Key West north, Pirate's Cove, Long Key, Bahia Honda, and many another nook and cranny along the coral reefs. Most of the fishing in these waters is done by trolling, with spoon, Japanese feather, plug, or cut bait. Along with the schools of big fish there are many schools of small tarpon — ten, twelve, fifteen-pounders — and there is no finer sport than taking these little fellows on fly or bait rod. As a matter of fact, and just between friends, I would rather get into a school of ten-pound tarpon with a bass fly rod than catch a 200-pounder with my heavy tackle — and I know many another dyed-in-the-wool tarpon fisherman who has come to feel the same way.

Gradually the fish begin to work north. They come into Everglade, to Marco and Naples, to Fort Myers and the Caloosahatchee, Captiva, Boca Grande, Venice, Sarasota (home of the International Tarpon Tournament), Pass-a-Grille, and on up the west coast to Homasassa, Crystal River, etc.

Of recent years there has been quite a development in tarpon fishing along the east coast of Florida. In the summer months, even into August and September, fish are found along the beach as far north as Daytona and St. Augustine. Unfortunately, the east coast fisherman is under a considerable handicap as compared to those who do their tarpon fishing in one of the west coast passes. The east coast angler must pick reasonably calm days, for all fishing is done in open water and the Atlantic can be quite disagreeable to small tarpon boats. A friend of mine told me of a curious method of catching bait which was commonly used off Daytona Beach. Vast schools of menhaden were encountered, and it was in these schools that the tarpon struck. The guide circled slowly through the bait, casting with a short, light steel rod such as is used in fresh water bass fishing. On the end of the silk line was a set of large gang hooks, which was retrieved with a series of short, sharp jerks. On almost every cast at least one menhaden was snagged and quickly transferred to the bait well. The fish were actually so thick in the water that it was impossible to drag a hook through them.

The best all round bait for tarpon fishing is, in my opinion, a small catfish or a small blue crab. The catfish should be from six to twelve inches long, and the crab should not be over three or four inches in width. Both of these baits are standard fare, will live persistently on a hook, and can be had almost anywhere. It is wise to remove the crab's claws and the catfish's fins before placing them on the hook, in case it later becomes desirable to change bait. The prick of a catfish fin is quite painful and the nip of a crab is annoying, to say the least. Rockfish, pinfish, small grunts, sea robins, needle fish, or any other small fish are good bait but none of them surpasses the old reliable crab or catfish.

Mullet, of course, is good bait and is used in many different ways in different localities. Down around Marco the guides lace a whole mullet on a 11/0 O'Shaughnessy hook with a pliable airplane wire leader. The tarpon is allowed to pick up the bait and run with it, exactly as would be done in handling a channel bass strike. Sometimes half a mullet is used in a similar way, and often cut mullet is used in trolling. A live mullet is excellent bait, but is difficult to secure and will not live long on the hook.

Ordinarily in live bait fishing, which is certainly my favorite method of fishing, the tarpon strikes quickly and savagely and the angler should strike back the instant he feels his fish. In nine cases out of ten the fish will be in the air

(*Continued on page 129*)

A tarpon leaps clear in a perfect arc, and enters the water nose first. (Photos by Julian A. Dimock, courtesy of American Museum of Natural History)

A Jolt to the Experts

"Jollity's" Performance Amazes All But Her Designer

By

WESTON MARTYR

"Jollity" rolls up a lot of suds under her bow but that is about all the wave-making she does — and can she travel!

ER NAME is *Jollity*, and when I first saw her she made me want to laugh. But I restrained myself, because Ingo Simon, her designer and owner, was looking at me enquiringly. I did not want to hurt him because he is an old and esteemed friend. And I did not want him to hurt me, because he is twice my weight. He said, "What d'you think of her?"

I hedged. I said, "By Jove! You've got plenty for your money. There's more boat there for her length than ever I saw in my life. I think it's very clever of you." Which I think was very clever of me.

The boat, three parts finished, stood or, rather, *bulged* above us on the ways, and I gazed at her bloated proportions in horror. Yes, horror is the word; for it is horrible to see a man you are fond of getting badly hurt. I looked at Ingo; he was gazing at his creation with love and pride glowing visibly in his eye. His face was the face of a mother, gazing at her first born, and I hated to think how it would hurt him when the inevitable realization came that his child was an idiot and deformed.

Ingo said, "Every line is a streamline as nearly as I could work it in. That's the whole idea of her. I designed her with the object of getting a comfortable, seaworthy little cruiser able to stand up to most things, and something I could handle by myself. I knew, with those streamlines, she ought to move through the water with a minimum of disturbance and she wouldn't be slow. But, now I've seen her in the flesh, I think she'll be fast."

Fast! I *had* to laugh; but I ducked behind *Jollity's* bulging bows and did it quietly. I sneaked off to the darkest corner of the shed where I could grin unseen. From there I had a good view of the boat, and she looked such a dreadful tub that instead of laughing I nearly cried.

I hid in my corner for a while, for the more I looked at the boat the less I felt like looking her designer in the eye. *Jollity* was terrible, dreadful, obscene. She looked like the bottom of a deformed Dutch cheese. Her bow was as full as an apple, and she finished off aft with a heavy great transom as square as the back of a barn, so that what water she did not push ahead of her she would drag astern. She looked as deep as she was long, and her minimum freeboard looked more than her maximum draft. Her keel was straight and almost as long as her water line; her displacement would probably be that of a battleship; and she looked hogged.

And there was my poor friend, gazing at his fearful creation with pride and love, thinking how fast she was going to be! Fast! The question to my mind was: would she sail at all? I doubted it.

When I came out of hiding, Ingo said, "Well?" I said, "She's so unusual, such an original design, old man, that I hardly know what to say. You'll get simply marvellous accommodation inside her. I should say she'll need a lot of canvas to drive her; but with that midship section and the top weight of all her freeboard, I don't quite see how she's going to stand up under a lot of sail."

Ingo explained. His ideas were plausible — but revolutionary. Much too revolutionary for me. I like to think I am progressive, with a mind wide open to new ideas, but I found it impossible to believe that a boat could be any good at all, far less a success, if designed by an amateur on lines and principles guaranteed to make any professional designer laugh.

Said Ingo, "She'll be so easily driven, she won't *need* a lot of sail. Most of the water she displaces is going to be pushed underneath her by that bow. And she won't have to drag any waves along aft because she won't make any waves. Her streamlines will attend to all that. And, so far from being tender, she'll be as stiff as a church. You seem to see only her midship section, but look at all her other sections. She carries her beam from end to end of her; she's not just two sharp ends with all her beam amidships in a lump like most modern boats. When *she* heels she's got to immerse her beam, all of it, all along the lee side. So she won't heel; she's got too much power."

There being small profit in trying to reason with a fanatical heretic, all I said was, "H . . . m." I added, quickly, that there would be a wonderful lot of fine deck space everywhere, while forward, especially, one would have lots of room to move about and do a real job. Then I remembered I had a train to catch and departed, sad at heart at the thought of the painful disillusionment and grievous disappointment shortly coming to my poor friend when he should first set out aboard that hideous atrocity which, I felt convinced, would neither sail, stay topside up, nor steer.

Poor *Jollity*. She caused a lot of it. She was well named, at any rate. Everyone who saw her on the stocks either laughed, jeered, or did both. Everyone, that is, except her builder, Dan Webb. Webb is a diplomat, with a fine, unprejudiced eye. When I asked him what he really thought

about the boat, he answered, "Well, she looks queer, and if I had my way I'd fine her down a lot forr'ad. But Mr. Simon's got some fine ideas *and* he isn't scared to put them into practice. Which makes me think! There's something very clever somewhere about that little boat's run. Maybe she's going to surprise us." But when I took a successful and distinguished designer down to have a look at *Jollity*, he said: "Oh God! What a damned wicked waste of good wood."

Jollity is only 27 feet over all, 25 feet on the water line, with 9 feet beam and a draft of 4 feet 6 inches. She has 37 cwt. of iron on her keel, and her minimum freeboard is nearly three feet. On top of this she has a heavy, solid mast nearly 7 inches in diameter and 40 feet from deck to truck. All of which explains why I confidently expected to hear she had capsized immediately upon launching. It also explains why I was scared to death when Ingo held me to an early promise to accompany him on *Jollity's* maiden trip.

We started from Maldon and, as we motored down the Blackwater, I thanked the gods that the water was warm, the river narrow and the wind a flat calm. I was looking at our mast and thinking of the cold North Sea ahead of us, when Ingo said, "We're doing about six knots through the water on half throttle. Will you look at our wake?" I looked, and except for the convolutions created by the propeller, there was no wake.

"No quarter wave, either," said Ingo. "She's slipping through it like a fish. Take a look over the bow."

Forward I found much sound and fury and great foamings at the mouth. "She's pushing half the river in front of her," I cried, and Ingo said, "Nonsense." But I caught an anxious look in his eye as he left the tiller and came forward. In a little while he said "Nonsense" again. "That's mostly foam and mighty little solid water. Look! Watch that piece of seaweed coming. You'll see. She won't push it aside; she'll slide over it." And she did.

"So far, so good," said Ingo. "She's doing just what I hoped. We'll anchor now and get the run of her gear. We'll have all night in, and tomorrow, if Allah sends us wind, we'll take her to sea and try her out properly."

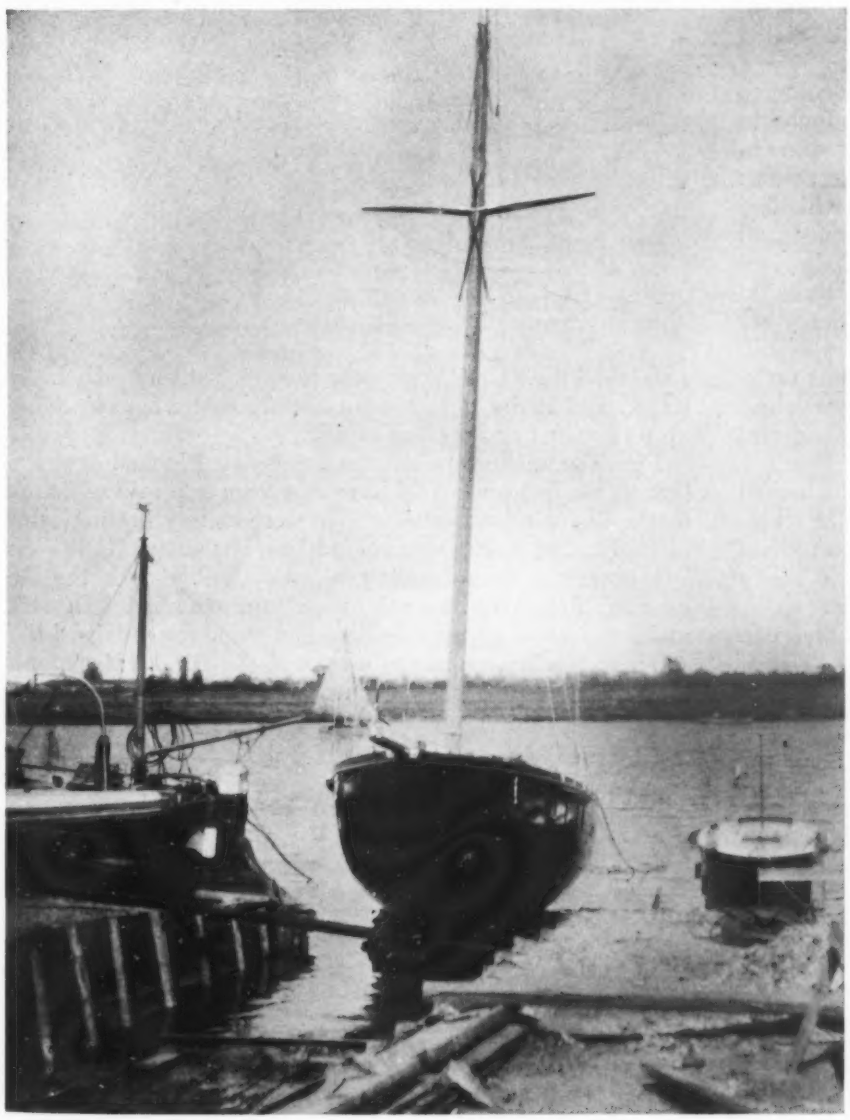
Getting the run of *Jollity's* gear was simple, there was so little of it. Four halliards and sheets, two lazyjacks and the flag halliard was the full extent of it. No runners, thanks be! And those lazyjacks were not the only sign that Ingo had once upon a time sailed boats about the harbor of Gloucester, Mass. *Jollity's* jib set on hanks on the stay and her bowsprit had a broad promenade along its top. These things rejoiced me, because I think our English practice of setting a jib flying and balancing on a slippery pole of a bowsprit when trying to stow it, is a silly and dangerous habit. Other clean breakaways from tradition were: (1) No tackles or purchases, all halliards being single wires, leading to winches. (2) No hatch to cumber up the fore deck and let water below. (3) No cabin skylight to let the rain drip into your dinner and/or bunk. (4) A mizzen which — But this affair deserves some paragraphs to itself, even at the risk of breaking the thread of my story.

I hate trick sails. They always make trouble, which is something I like to avoid; but I knew I was in for lots of it when Ingo said, "We'll bend on the mizzen and see how it sets." Setting a mizzen is simple enough when you have a mizzenmast to set it on; but *Jollity's* mizzen set on hanks and a boom fitted to her permanent topmast backstay. Ingo borrowed this idea from a recent article in YACHTING. It is a good idea, *but*. . . .

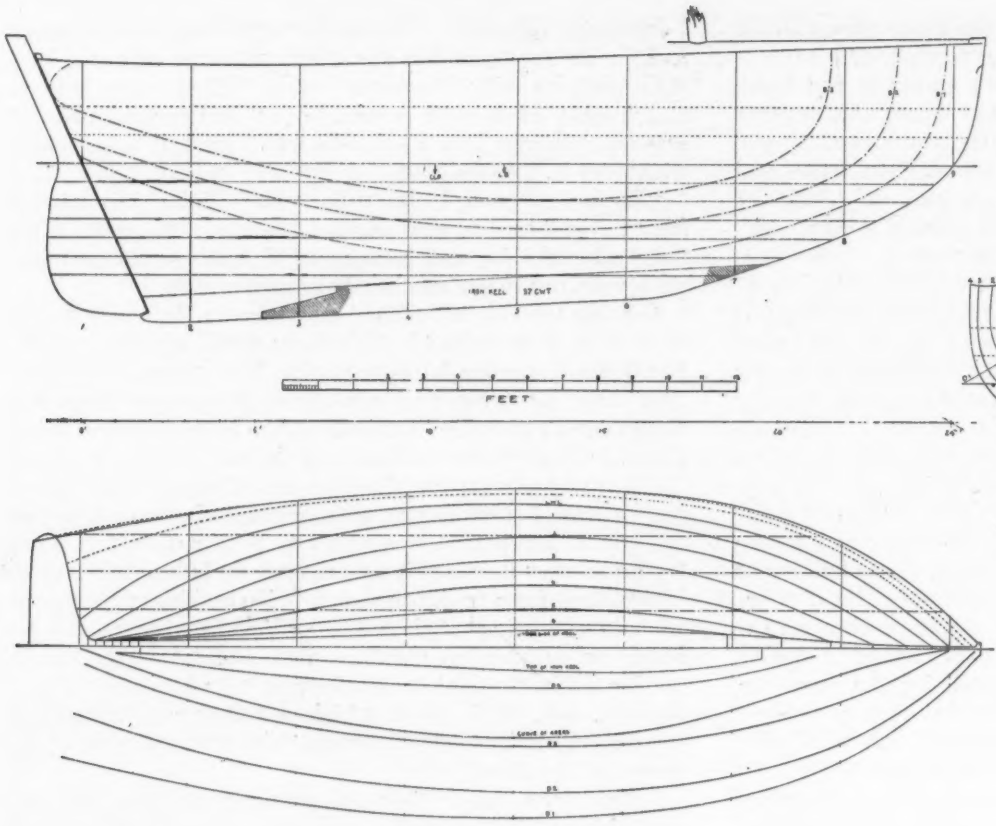
We bent on that sail and set it. It looked fine; but it was a good thing we were not under way at the time, because the boom fouled the tiller, jumped off the stay, smashed the binnacle and speared me in the stomach; the sheet got a turn round Ingo's neck and throttled him; while the cockpit filled with such a tangle of sail and gear that one risked one's life to go near it. And stowing that sail was worse.

But, to give the inventor his full due, I will say his sail, when up and setting, was splendid. When reaching, it was most effective. When running, you could goose-wing it and let the boom run so far forward there was never any risk of a jibe. Close hauled, too, it was perfect; but it took us a week before we found out how to make it set on a wind. We had to put a tackle on the boom and heave it well out to windward. We had to clap on another tackle and bowse the end of the boom down until the leach was as taut as the luff. With these, and a few more odd contrivances, that sail drove the boat to windward and set like a dream. But the dream turned into a nightmare every time we tacked, when we had to unrig all our doings and rerig them to windward again.

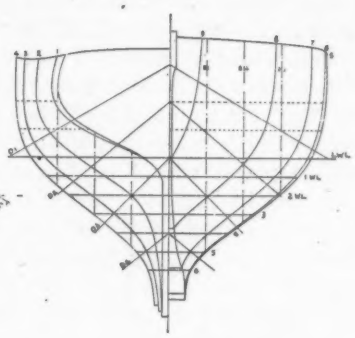
All this trouble, of course, was our fault, not the inventor's; *but*, if he can tell us how to

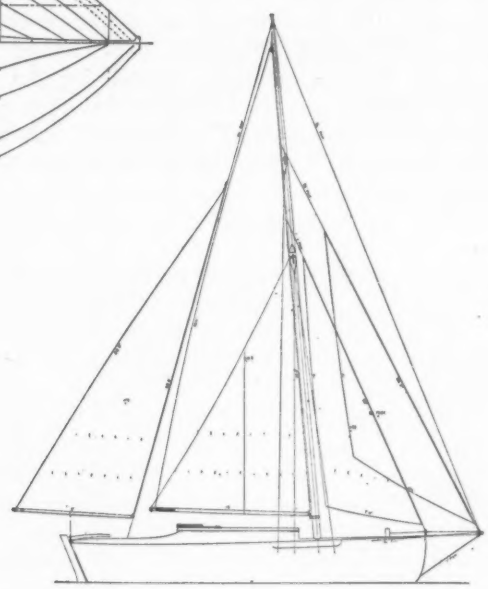


With no ends and lots of freeboard, she may look tubby at first sight, but her 27 feet of length is all boat. Below water her lines are easy



"Jollity's" lines suggest the "cod's head and mackerel tail" of old times, but her run is clean. The rig, with its after staysail, looks odd to British eyes





counteract the terrific strain his mizzen sail puts on the mainmast, he may save Ingo the trouble and expense of giving *Jollity* a mizzenmast next spring. But I doubt it.

To take up the thread again, we woke next morning to find it blowing a real snorter. This is as definite as I care to be about that wind. I am bad at judging the wind's speed in m.p.h. or according to Beaufort's scale. All I know is, when I put my head out of the cabin hatch, the wind made whistling noises in my beard; it took hold of *Jollity's* bare mast and heeled her appreciably; it cut the tops off the little river waves and dashed them in my face. I ducked into the cabin and said, "Nothing doing today, unless you want to try her under trysail."

But Ingo said, "Rot! This is just the weather I was praying for. We'll give her full sail, bar that damned mizzen, and let her show us what she's made of. This breeze is wonderful luck."

I took off my shoes before hoisting the mainsail and looked at the river banks. I should not have far to swim. The mainsail slatted madly as I hoisted it. I took hold of the windlass handle but, before I moved it, I shouted to the poor boat's infatuated owner, "Far better take down some reefs!"

Cried the owner, "No! Spoil my new sail. She can stand it. Heave up!"

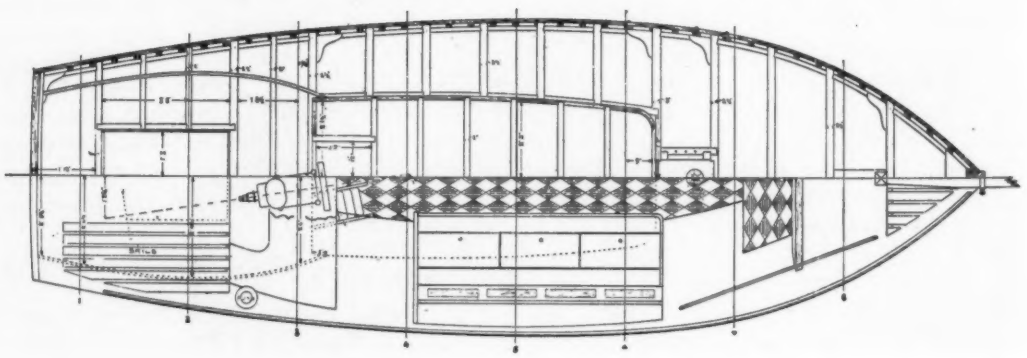
I hove. The anchor came away. *Jollity* paid off and heeled over. I knew she was going to capsize and stood by to jump. I watched the lee rail, expecting to see it vanish beneath the water. But it did not; instead, *Jollity* shook herself, stood up on her feet and started sailing.

I got the anchor and set the headsails. I looked over the bow at the biggest bone I have ever seen in a sailing boat's teeth. The wind was abeam. We were merely heeling comfortably. And *Jollity* was going like a bat out of Hell!

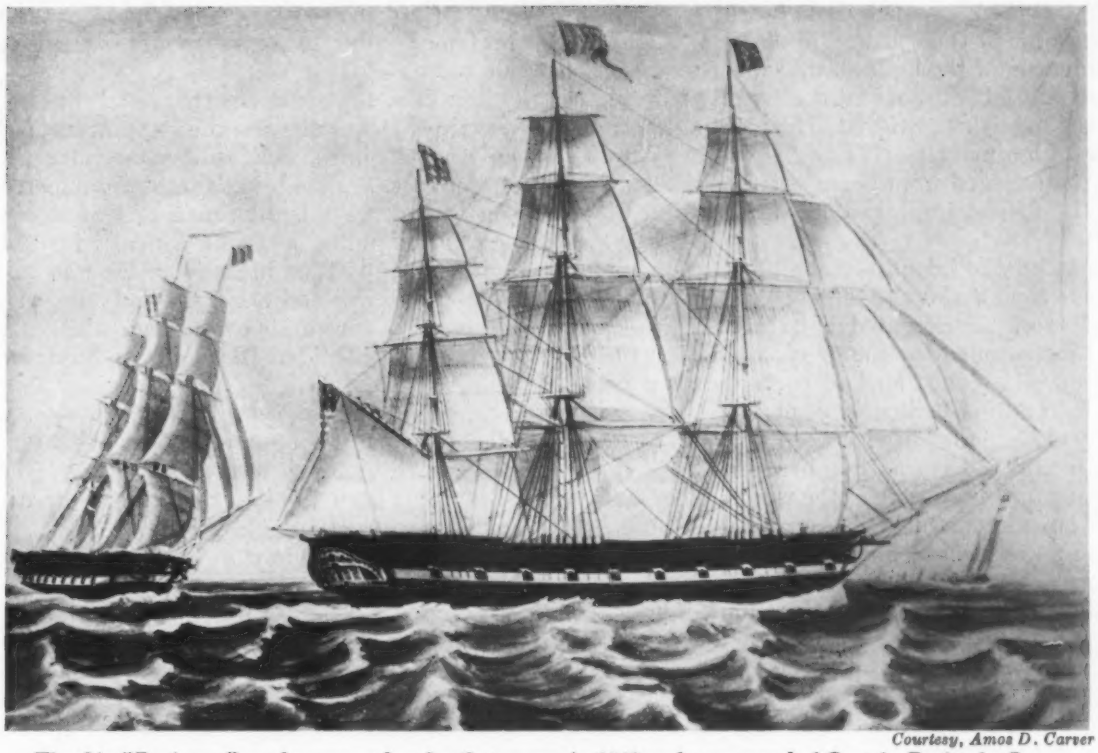
I observed Ingo bending himself double over the lee quarter. Presently he straightened up, grinning. "Doesn't make *any* wave, apparently," said he, "and she sails herself."

There is a beacon at the mouth of the Blackwater and a buoy at the mouth of the Colne. I take it no one will believe

(*Continued on page 121*)



Her cabin kept four people dry, warm and happy during a ten-day cruise when it blew and rained most of the time



Courtesy, Amos D. Carver

The ship "B. Aymar" as she appeared on her first voyage in 1840 under command of Captain Benjamin Carver of Searsport, Maine, where she was built by John Carver. The painting was done by a Dutch artist and shows her entering the Texel. Captain Slocum took her in the China trade in 1873–1875

Cap'n Josh Slocum

Part II—Some Incidents of Pacific Ocean Traverses and a Venture in Shipbuilding

By VICTOR SLOCUM

THE voyage of the bark *Washington* having been settled up, the same owners, Bichard & Co., gave my father, Captain Slocum, the barkentine *Constitution* (362 tons) which was running as a packet between San Francisco and Sydney, with calls at Honolulu and Suva. One of her round voyages was varied by a trip between Newcastle, N. S. W., and Valparaiso, on which passage a stop was made at Easter Island for fresh water. This island is known to have a good rainfall and fresh water is generally to be found stored in the volcanic craters near Cook's Bay, where the crew of the *Constitution* landed.

This visit was of unusual interest, for on Easter Island are to be found the huge stone images which are one of the mysteries of the Pacific. As they weigh from five to thirty tons, the *Constitution* could not carry off even the smallest of them, having neither the gear nor the time to handle them. In 1886, however, the U.S.S. *Mohican* succeeded in securing some of them for the Smithsonian Institute in Washington, D. C., where they now can be seen. These were the traces of an ancient maritime people of the Pacific, who probably migrated from southern Asia, voyaging in sea canoes as the Polynesians were once known to do, and traveling for distances that ranged to a thousand miles between inlands.

While on a voyage from Honolulu to San Francisco in the *Constitution* Captain Slocum made a reputation as a lunarian, his chronometer having broken down soon after leaving port. As the chronometer had always been rated by a series of lunar observations worked for longitude, this mishap made no difference as far as the navigation of the vessel was concerned. In fact, the voyage had been unusually short, and in appreciation of this the owners presented him with the best gold "E. Howard" that money could buy. (This watch is in the family now.)

This circumstance throws light on the navigation of the *Spray*, which has never been well understood, owing perhaps to the Captain's purposeful vagueness on this particular point. I have found even professional navigators who took his "tin clock" seriously and thought that the *Spray* blundered in her longitudes and made landfalls simply by running down the latitude until something hove in sight. To quote from *Sailing Alone:* "If I doubted my reckoning after a long time at sea, I verified it by reading the clock aloft made by the Great Architect, and it was right." By this the Captain meant navigating by lunar observations, the method of obtaining Greenwich time by measuring the angular distance between the moon and the sun or any other tabulated heavenly body. This observed angular distance was referred to the Lunar Tables which were carried in the *Nautical Almanac* until 1925. The lunar formula is still indicated in the present editions of the almanac for the benefit of any enthusiast who may have the double misfortune of losing both his timepiece and radio.

In San Francisco the Captain was shifted from the *Constitution* to the bark *B. Aymar*. He met the barkentine again, not long afterwards, in the Okhotsk Sea, where she did him a good turn. She was finally wrecked in the great typhoon of 1889 in the Samoan Islands.

The *B. Aymar* (516 tons) was built by John Carver in Searsport, Maine, in 1840. She was the seventeenth vessel to run down the ways of that notable New England shipbuilder.

Between 1825 and 1864 John Carver built 37 seagoing merchant vessels. Through the courtesy of Amos D. Carver of New York, grandson of the builder, who was part owner of the *B. Aymar*, I am able to present a copy of a painting of the ship as she was originally rigged. The painting was done on glass by a Dutch marine artist and shows her entering Amsterdam. She changed from Searsport to San Francisco ownership in 1871. The Captain took her into the China trade in 1874.

While hove to off the Island of Oulan for fresh supplies during a passage from Sydney to Shanghai, the Captain fell in with Bully Hayes, the celebrated man stealer. Hayes came off in a smart gig manned by a crew of beachcombers and wanted to trade off a canoe load of coconuts for a Bible. He was then hiding from justice by posing as a missionary. "My own copy of the Scriptures has been worn out by much use," he explained, "and my natives here are sitting in the darkness, waiting for the reading of the word." The Captain felt a shock of surprise at thus meeting this most notorious scoundrel among the islands, but treated him with the respect due his magnificent bluff. Hayes shoved off with a new Bible under his arm, leaving the ship very much in his debt. He showered supplies like a prince.

Hayes' best known exploit was his operation of the ex-missionary bark *John Williams II* which had been cast away on a reef, salved, refitted, and given the new name *Lenore*, which she bore when he came into possession of her. For a time he did not know what a prize he had found until one day, while out on the high seas, he found her old burgee of other days, the L.M.S. (London Mission Society) flag with the palm branch emblem of good will and peace to all. He hoisted this pious emblem to the main and squared away for his first cargo of "blackbirds," a business which was then flourishing under the provisions of the Queensland Labor Act of 1865. The islanders were familiar with the old flag and flocked without suspicion into the hold; then Bully Hayes clapped down the hatches and sailed away to the plantations to sell his congregation. He carried on this heartless business until he was forced by pursuit of gunboats to abandon the *Lenore*. In his hairbreadth escapes the natives, for some reason, would never betray him.

The Captain described Bully Hayes as a massively built man, well past middle age, and wearing an air of great dignity and authority. He was certainly no coward. Once, when the methods of a German trading company aroused his ire, he declared a single-handed war upon the German Empire. He opened hostilities by turning the German Consulate upside down, going through the place with an ax and making hash of the office furniture. Then he chopped down the flagpole, imperial flag and all. This cyclonic stroke of diplomacy won him the respect of the natives who could now see for themselves that Bully Hayes was a greater man than the Emperor of Germany himself, and the tidings of his prowess swept through the islands, causing his trade to increase and his fame to grow until his schooner became too small to carry his goods.

The bark *B. Aymar* changed hands in Manila and in connection with her disposal the Captain met Edward Jackson, an Englishman of delightful personality who lived in the Philippines. Besides being a substantial merchant, Mr. Jackson was also a scientific man and an accomplished naval architect. He had just won a medal for ship design at an industrial exposition in London. He was building up a line of small inter-island steamers and wanted a new 150-ton steamer built from his own design; this vessel the Captain contracted to build at Olongapo, on Subig Bay, about sixty miles from Manila.

Olongapo was a natural shipyard site, with timber in abundance on the mountain slopes behind it and a building and launching beach with good water in front. It probably always has been a building site used by native shipbuilders for the construction of their small coasters. There is a great naval station there now but then it was merely the edge of the jungle.

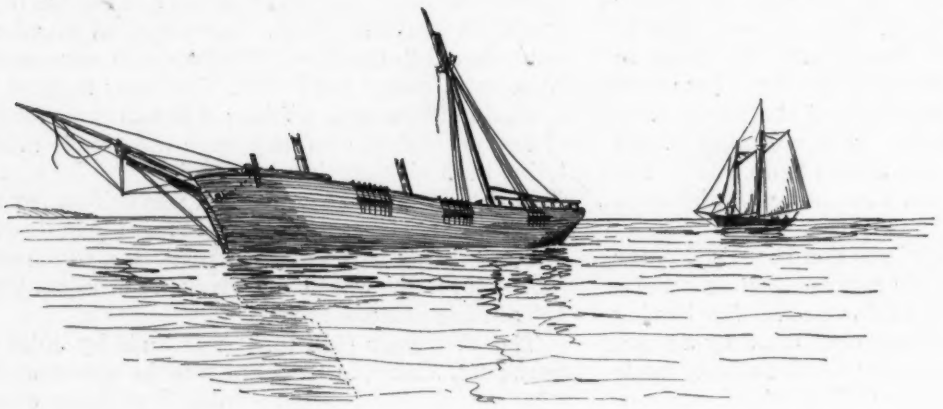
The contrast between the natural conditions there and in Puget Sound was striking; poisonous exuberance of vegetation took the place of fir balsam; instead of safety on the forest floor there was peril from poisonous creeping things. When cruising for timber through the forest trails, a sharp watch was always kept aloft for a boa constrictor dangling from the tree branches, ready to drop on passing prey. The crocodile was the greatest danger, however, for he lies submerged, nose to shore, in muddy water, with only the nostril, like a small crater, above the surface. His respiration may be heard at a short distance like a faint whistling snore and, so completely are his coloring and texture adjusted to natural surroundings, that were it not for the breathing, he could not be detected by the eye. In this position he is ready to grab any land creature approaching to drink.

Near Olongapo was a swamp infested by crocodiles and these added their barkings to the weird chorus of forest sounds heard when darkness suddenly closed down. This began with the singing of the locusts and ended in a concerted roar which lasted for the first two or three hours. Nothing like it is heard except in jungles like those to be found in the Philippines.

It was between this forest life and the sea that the village of Olongapo stood, and a primitive place it was indeed. The first thing the Captain did was to build a *nipa* house for his family, which he always had with him in all of his enterprises. Building a *nipa* house may seem to be a simple job, but it was not so easy as it looked, for the natives would much rather go to a cockfight than work.

These native houses are built between four long posts of

(*Continued on page 123*)



The "Pato" arriving to salve the cargo of a British bark wrecked on North Danger Reef, in the China Sea, 420 miles from Manila. The bark is hanging by her forefoot to the edge of the coral

Fitting Out Time Again!

Under the wind driven clouds of April or the bright sunshine of May the work of overhauling and painting goes on, with launching day just around the corner

Rosenfeld Photos

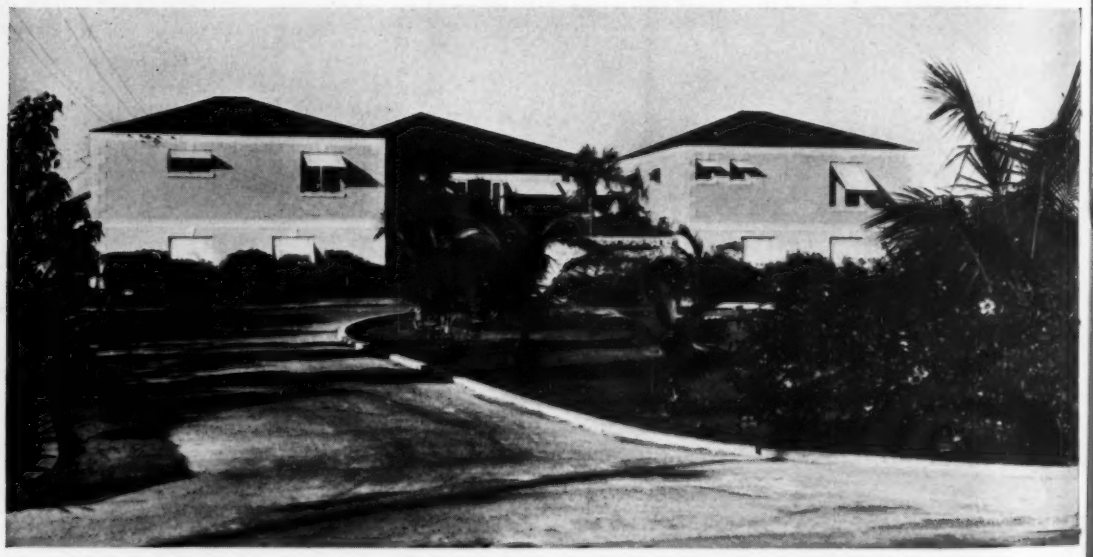
John V. McCleee

The harbor entrance, looking out to sea from the grounds of the British Colonial Hotel

The Nassau That the Yachtsmen Know

Photos by M. Rosenfeld

The clubhouse and grounds of the Nassau Yacht Club and, above, the circular bar of this hospitable resort of visiting yachtsmen



The harbor, with all manner of local craft at anchor, and Vincent Astor's ocean-going Diesel yacht "Nourmahal" in the distance

An Amateur Builds a Comet

By

WILLIAM W. KERR, JR.

A LITTLE over a year ago my city (Springfield, Illinois) began the construction of an artificial lake some fourteen miles long and about a mile wide to be used for water supply and recreational purposes. When the project was started I realized that a body of water would be available for some type of sail boat, and that, whatever she might be, I would have to build her myself.

A review of my assets showed a fair knowledge and aptitude in the use of tools, a satisfactory empty stall in a garage where I could work through the winter, a set of borrowed tools and a depression budget that would groan under any undue strain.

A letter to the editor of YACHTING requesting information about a boat suitable for the lake was answered, giving me my first knowledge of the Comet Class sail boat. A second letter, requesting plans, brought me the first set of detailed boat plans that I had ever seen, save for sketches and cuts in magazines.

The first step was the development of plans into full scale working drawings according to the usual methods. As a smooth wooden floor was not available, a wall partition of suitable dimensions was used. A ¼″ x ¾″ batten strip was used in fairing all lines as it was found that a heavier strip, though recommended, tended to split and crack. A question arose at this point and the answer is still unknown to me, due probably to my unfamiliarity with the reading of marine plans. There seems to be a discrepancy in the vertical distance from chine to keel in the side elevation and the cross sections. References stated that, if such difficulties arose, the lines of the full size drawing should be faired and the resulting hull dimensions taken from that rather than from the blue print. This is a good rule to follow in developing hull lines from plans. By not giving it due weight, some difficulty was experienced in making the stem.

As the making of the stem seems to be accepted as the most difficult task in building a small boat, it was attempted next. The scarcity of details for that piece did not make the task any easier. Reading established the fact that it is good practice to make the cutwater ½″ wide and to provide a width of stem so that the rabbet cut in each side will be separated by twice the thickness of the planking. A line was drawn along the sheer and chine of the plan drawing representing ¾″ planking in place. These lines were extended towards the bow until ¼″ from center line. A point was then established on the sheer and chine lines which would allow 1½″ of stem to come in contact with the planking and carry the plank fastenings. The distance from this second point to the center line, therefore, represented half the thickness of the piece required for the stem. This work also developed the required section through the stem at the sheer and the chine.

The curve of the stem was next drawn on the elevation view, and a piece of oak, 2¾″ x 6″ x 4′, was bought for it. The four-foot length was enough to make the stem and a knee to reinforce the stem and keel joint.

The developed plans were next measured for the required frame dimensions at each station, half station, and the transom, and paper templates were made. The transom template was made according to the dimensions given on the blue print.

As oak could not be obtained at a reasonable price, long leaf yellow pine was chosen as a substitute. As pine cannot be steamed, the bottom members of the frames were cut to shape, the deepest arc requiring a 6″ x 1″ stock piece of pine to provide the required 1½″ width at the chine joint. The frames, from chine to sheer, were made from 1″ x 3″ pine. Cypress was used for planking, centerboard box, and transom, the last being 1½″ thick.

Galvanized iron fastening of any kind could not be had, so brass screws were used throughout. The bolts required for fastening the stem and centerboard box to the keel had to be cadmium plated as they were not available in brass or galvanized iron. Carriage bolts were plated.

The keel and keelson were assembled next. The keel, a 1″ x 4″ piece of pine, and the keelson, a 1″ x 5″ piece, were fastened securely together with two 1½″ No. 12 screws every six inches of length. The location of the centerboard slot was scaled from the blue print and cut through the keel assembly.

The frames were made next, using the paper templates. The cut pieces were placed over the templates, clamped in position, and then fastened with two No. 12 screws at each joint. A temporary brace was also placed across the top of the frames at the sheer line. After the frames were assembled, their sides and bottom were beveled so as to fit tight against the planking, the required bevel being taken from the full size drawing.

The keel, stem, and transom were laid down in the usual manner. The centerboard box was assembled as a unit, using 1¼″ cypress planks. The trunk logs were made of 1″ x 3″ pine, screw-fastened to the box. The whole assembly was bolted to the keel with eight ¼″ bolts. A heavier trunk log would have been better, but the 4″ keel and the heavy box section set the size of the trunk log at 1″ to keep the bolts wholly within the keel.

After the keel was placed and leveled in position and the centerboard box placed, the frames were fastened to the keel by 3″ screws, two to each frame. The frames were plumbed and adjusted to cross the keel at right angles and held in this final position by overhead bracing clamped to the frames so that future adjustments could be made easily. The frames at the centerboard box were cut to fit it and fastened to the box with 1″ x 4″ x ⅛″ cadmium plated angles.

The chine strip, a 1″ x 2″ piece of pine, was next fastened to the frames, which had been notched to receive it before fastening to the keel. Strips were notched into the sides of the frames, stiffening the whole framework at this stage and forming seam battens for the planking which followed.

After this was done, the entire framework was again checked for symmetry before planking. A batten was used to check the bevel of the frames, and to correct slight irregularities in them. It was necessary to plane some frames and to spread others at the sheer line before a fair line was formed by the test batten in various positions.

Planking was next. This was the most difficult phase of the work, as I had only a vague idea how to develop the shape of the various planks. Some insulating paper was tacked to the side of the boat by thumb tacks. A sharp knife was then run along the top of the batten at the sheer line and along the bottom of the chine. The batten strip along the middle of the side was located through the paper and a line run along the middle of it to represent the plank seam.

A Midwestern "Comet," built by the author when his home town created a new lake

The battens were placed originally after determining that the side planking could be made from two 12″ pieces. The paper was then removed and cut to pattern for the two side planks. As a check, the patterns were tried on the opposite side of the boat.

The patterns, being found satisfactory, were measured for length and it was found that the planking could be cut from stock 16′ pieces, without a butt joint in their length. The top plank, or sheerstrake, was placed first, held in position with clamps, and fastened with 1½″ No. 8 screws. The lower plank was placed next. This plank caused trouble as it had to be warped to fit against the stem due to the fact that the stem, as built, joined the keel about 2″ too far aft — the 2″ which showed up in the beginning when the full-size drawing was made. This trouble was overcome by cutting the plank into thirds for about 18″ along its length from the stem and bending each section into place. After the side planking was placed, the false work was removed and the boat turned bottom up and placed on horses ready for the bottom planking. This planking was fitted without difficulty, and the "spiling piece" method of determining shape was used.

Upon completion of the planking, caulking was undertaken. This consisted in filling all seams with twisted caulking cotton and painting with a heavy coat of white lead paint. When the paint was dry in the seams, a plastic seam compound was put over the caulking and the entire hull puttied and sanded in preparation for painting.

The hull was now righted, and the temporary frame struts were removed and replaced with deck beams crowned 1½″ in 2″. The deck was framed to provide a cockpit 7′ long and 30″ wide, rectangular, rather than as shown on the plans. Though this does not produce as sightly a cockpit, its construction was easier. The sides were braced by two posts on each side between frames and coaming. The deck beams on either side of the mast were cut from 2″ x 4″ pine, and the others were made from 1″ x 3″ material.

The mast step was placed next. Never having seen one, I did not know what size to make it. A 2″ x 6″ piece of yellow pine was fitted between the frames adjacent to the mast. As the rake of the mast was not given, the location of the socket was scaled from the print and a 2″ square hole cut through the piece. Two ¼″ x 6″ carriage bolts were used, one on each side of the hole and about 1″ from it. The step was then fastened to the keelson with six brass screws. The heavy deck frames on either side of the mast were notched out to permit placing two pieces of 1″ x 6″ to serve as partners. The mast hole was not cut through these pieces until after the deck was on.

The breasthook was built up from two pieces of 2″ by 4″ in the form of a cross. The short leg is fastened to the sides and is to carry the anchor rope chocks; the long leg is fastened to the stem and to the frame at station 1 by a vertical member fastened to both the deck beam and frame.

Painting the interior was next, being done before the deck was on. Planking for the deck was painted at this time, one side only, so that it was ready to fit without any delay. Asphalt was run in along the keel at the garboard strake.

The skeg and rudder were next made and fastened in place. A 2″ x 6″ piece of pine was used for the skeg, and a piece of cypress that had been spoiled in making a side plank was used for the rudder.

The centerboard was made from a piece of Armco ingot iron cut to shape by a nearby iron plant. The centerboard was pivoted on a ⅜″ machine bolt, the hole through the board being made watertight by wrapping caulking cotton on the bolt between the box and a metal washer, the bolt being drawn up tight with a nut. Felt could not be secured to make a gasket between the centerboard box and the keelson so six layers of flannel soaked in paint were used.

Sixteen-ounce canvas was stretched on the deck immediately after the third coat of paint. The canvas was a yard wide and a seam was made along the center line of the deck. This seam was covered with a 2″ strip of canvas set in a quick-drying waterproof solution of aeroplane wing "dope." The canvas was pulled tight and tacked with copper tacks at about 1″ intervals. The deck canvas was painted, 1½ gallons of paint being required before it was thoroughly impregnated and presented a smooth surface. The rubbing strake and the cockpit molding were put on as soon as the

painted canvas had dried enough to make this work possible.

After the deck canvas showing below the rubbing strake and cockpit molding had been trimmed off, the entire hull was painted four coats. Deck hardware was bought from one of the many companies handling marine products.

For the mast, luckily, a 4″ x 4″ piece of fir 24′ long was found which had been air seasoned for seven years. The many years of seasoning served our purpose well as the stick had assumed its final shape, and seven years on the lumber rack caused the dealer to sell it at a fair price.

The mast was square-tapered at a mill and then taken to the garage for hand finishing. It was suspended by ropes at frequent intervals and thus held in a straight line while given its final shape with a drawknife and spokeshave. A 2″ square end was cut on the butt to fit the mast step. As the finished piece was of ample length, it was purposely left a foot longer than plan dimension so that a small pennant could hang free of the rigging.

The boom and jib club were made of spruce. The boom was made a few inches longer than the plan showed to provide for the probable stretching of the sail in use.

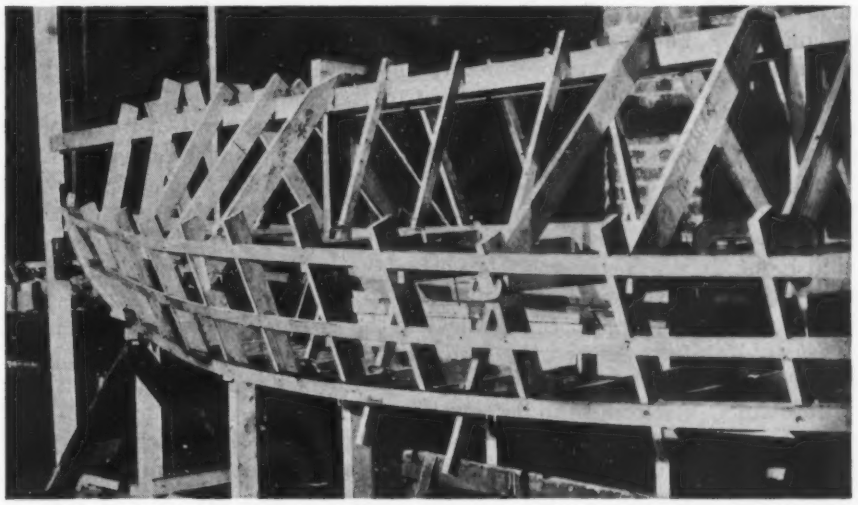
Sail track battens, made from ½″ spruce, were placed on mast and boom. The lower end of the mast batten was cut off a foot above the boom so that the slides could be slipped on easily. The location of the stays was then determined from the plans, and holes drilled through the track batten to accommodate them. Small wooden wedges were screwed to the mast to assist in supporting the rigging. The completed spars were given three coats of spar varnish and hung in rope slings until needed.

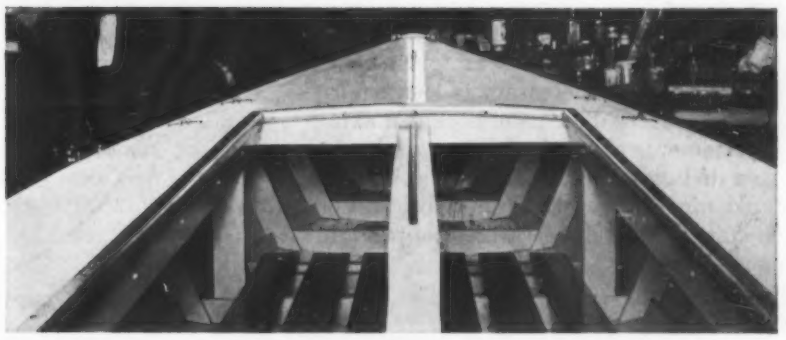
I hesitate to go into a lengthy description of the making of the sails, for all reading points to the fact that sailmaking is an art in which the beginner has little success. The sails as made bear the unmistakable mark of the amateur. Nevertheless, they are giving service and the ill-fitting jib is compensated for by a mainsail that fills beautifully in light air. The jib is being worked over to reduce the roach and improve its efficiency.

Six-ounce canvas in yard widths was bought for the sails and cut so that the seams ran parallel to the lines shown on the plans. Seams were lapped about ¾″ to provide for two rows of stitching. The ends of the pieces were cut to allow ample seams along the sides of the sails. After pinning and basting the seams, the sails were rolled parallel to the seams, which made it possible to unroll and sew one seam at a time.

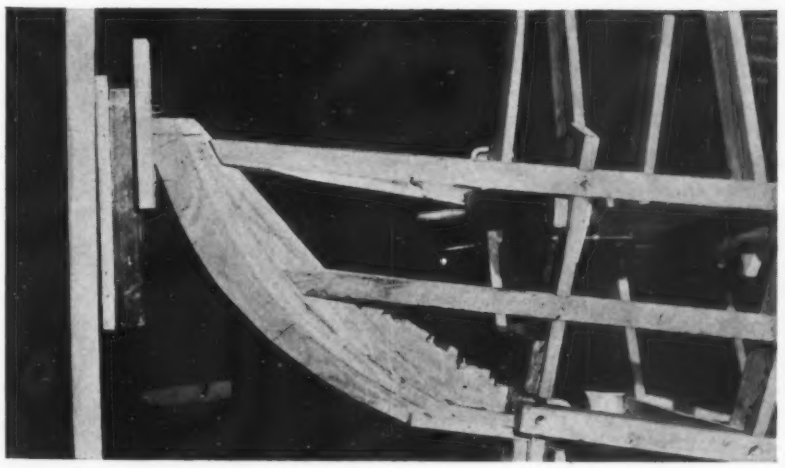
Rigging was done to plan, wire rope being used with 6″ turnbuckles. The halliards are ¼″ diameter manila and the sheets are of best quality braided cotton sash cord.

In her first tuning up trial, when sails were stretching, stays requiring continual tightening, and my handling that of one who is still learning to sail from a book, she held her own in an impromptu brush with a popular international class knockabout which she somewhat resembles. I can't help but feel that *Estrellita's* response to the tiller, and her ability to ghost along in the lightest of airs indicate a boat that will come through with a fine performance in any kind of going.





Above, each frame was braced athwartship by a "cross spall" before assembling and was also secured to a stout overhead timber when placed in the boat. Right, a view of the completed hull, looking forward. The frames and floors are clearly shown. Below, the stem and stem knee have been fastened to the keel, and the frames and battens are in place. Everything is well braced. Bottom, right, the stern with the rudder hung; the boat is ready for launching



On the Building of a Yacht

Part II—Electrical Equipment, Spars, Rigging, and Other Matters

By HENRY B. NEVINS

THE installation of tanks, both fuel and water, although not usually given much thought, is very important. A tank should, of course, be carefully made, carefully blocked up and braced to prevent shifting and to keep the contents, because of their weight, from bulging the tank and causing it to leak. A leaking water tank may be merely a nuisance; a leaking fuel tank is a positive menace.

Nothing so satisfies the instinct for adventure as matching wits and muscles against the elements and bending nature's dynamic power to man's own ends. Sailing a boat to windward is, perhaps, the finest example of man's domination over the forces of nature. Should not his boat receive from him the utmost care? Should he not know all about her, how she is built, and what materials go into her structure? Should this article bring you some additional knowledge of the way in which a good boat is built and cared for, it will have served its purpose. What follows applies, in general, both to power and sail boats, with notations here and there where special features pertain only to one or the other.

Monel metal is the best material for tanks for any purpose. It is free from all corrosion, is tasteless and it resists the action of most acids, but it is costly and expensive to work. Copper, tinned on one side, is reasonably satisfactory and probably the practical thing to use. The reason for using tinned copper for water tanks is to eliminate all danger from verdigris poisoning and bad tasting water. Tinning also materially reduces the sludge which accumulates in plain copper gasoline tanks and tends to clog feed pipes, strainers and carburetors. Each tank should have a shut-off valve close to the tank for use in case of emergency; vents to let out the air should be of ample size to avoid back pressure and belching of gasoline when filling rapidly.

The location on deck of both the vent and fill pipes should be chosen with judgment, away from cockpit and cabin openings so that, in filling the tanks with gasoline in calm weather, the fumes (which are heavier than air) will not get into the cabin where they are a potential danger; at the same time, due precaution must be exercised not to locate the openings where salt water will have access to the tanks.

The use of galvanized iron for tanks is false economy as this material has a limited life. It is necessary to locate most tanks in places difficult of access, making replacements expensive. However, in the case of large tanks for Diesel fuel, iron tanks of thick material are the best as the chemicals in fuel oil attack copper and cause trouble.

Plumbing

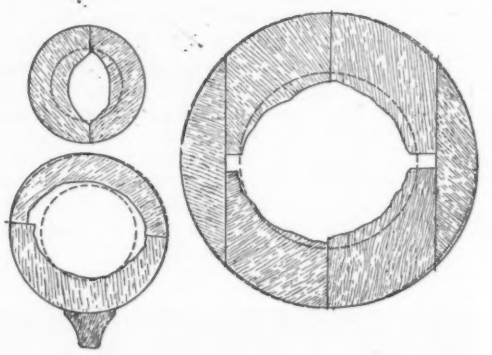
All plumbing systems should be so installed that they will drain to one or more low points, at which are located a valve or plug which may be left open during the winter to prevent freezing and bursting of pipes. The principal outlets through the hull should be provided with round way seacocks which should not be fastened directly to the planking but to a block fitted to the inside of the skin. Through bolts and nuts should be used. The hole through the planking and block should be lined with a short piece of lead pipe, flanged both sides, to insure a smooth outlet for waste, prevent leakage between block and planking and bar the access of the teredo to the wood. The growth of marine life is accelerated near waste outlets.

Protection Against Teredo

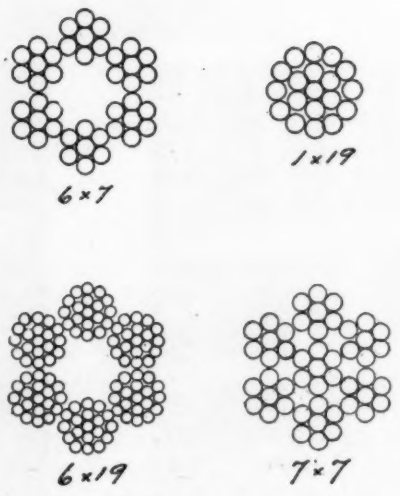
While considering the teredo, it may be well to speak of the protection of boats against this menace, which, of course, is greater in warm southern waters than in this locality and further north.

All places which cannot be easily reached with the paint brush, such as the interior of the centerboard trunk, if there is one, the channel at the after end of the sternpost, and the forward part of the rudder stock, should be covered with copper. Only in rare instances and for some special purpose need the hull of a yacht be copper-sheathed. Perhaps for a long trip to the South Sea Islands or West Indies, it might be of advantage on account of its absolute protection against the teredo. But copper sheathing will foul, grass and barnacles will grow on it, and the surface become rough after submersion in salt water for a certain length of time. Apparently, the reason for this is that what prevents marine growth from attaching itself to a submerged surface is the generation of a poison by the action of salt water on some metal or chemical on the surface. This action continues for a limited time only, after which the surface will be covered with an inert coating to which the growth will attach itself and the bottom become foul.

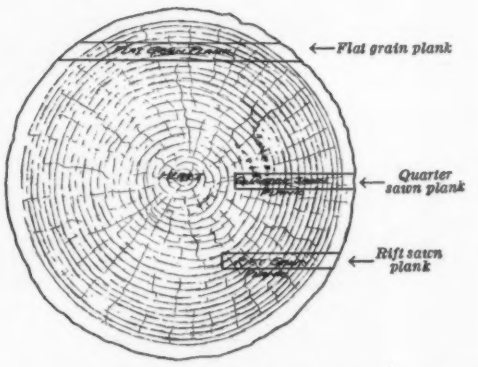
A true anti-fouling paint should consist of some metal or chemical held in suspension by a binder which is soft and chalky enough to wear off and constantly present a fresh surface for the salt water to act upon. That is why a racing



Right. Actual sections of spars. Dotted lines show inside and outside of properly built spars



Wire rope sections



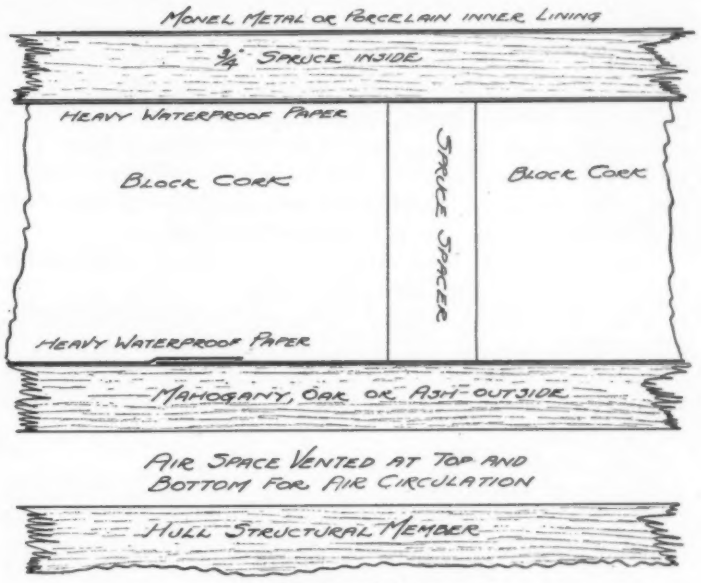
Location of planks in logs

paint which is hard, smooth and glossy cannot be anti-fouling for any great length of time, and why copper sheathing will not stay permanently clean. Furthermore, sheathing a yacht fills the planking full of holes and makes recaulking or repairs difficult and expensive.

Interiors

I shall not try your patience with details of interior joinerwork, fittings and upholstery. With the exception of the ice box, which is important, these are the least essential of any part of the boat. Figuring from the outside, an ice box should be built of a thickness of wood, a lining of paper, at least 1½" of block cork (or, better, 3"), then a lining of paper, after that an inside thickness of wood, preferably spruce (because of its clean taste and smell), and, inside of all, a Monel metal or porcelain lining. Last of all, the ice box should have a space between it and the side and deck of the yacht, through which the air can circulate. Otherwise, the members of that part of the boat's structure will rot because subjected to dampness through condensation, and with no means of ventilation.

Look out for the woodwork around the stove; it should be covered with metal over sheet asbestos. If you cook with

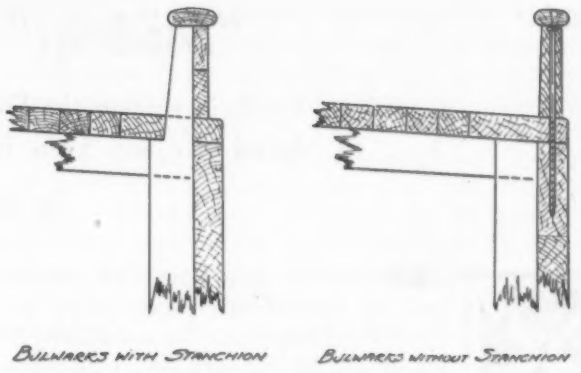


Section through ice box

gas, select carefully the location of the tank. By all means put it on deck if possible, and watch the connections for leaks. Insist on care when an empty tank is being replaced with a new one.

Electrical Equipment

Electric wiring should be insulated with the special covering designed for marine work, and should be run in conduit or what is known as "circular loom." Duplex lead-covered wire may be cheaper to install but it corrodes, is easily damaged and is a trouble-maker as well as dangerous on account of fire. Alkaline storage batteries are the most foolproof, have the longest life, take up more room and are more expensive than the lead type. It pays to use them for lighting, but they are not suitable for engine starting; lead batteries are the best for this purpose. Batteries should not be put in a confined space because of the explosive qualities of the gases given off when in use and when being charged. In most boats, it is better to have a separate auxiliary generating plant than to try to use the engine batteries for lighting.



Deck and Spar Fittings

I cannot go into all the multiple details of deck and spar fittings, appliances, winches, steering gear, windlasses, etc. They should be strong, well made and adapted for their purposes. A good steering gear, well installed, is essential for safety and it must be free and easy for nice steering.

Deck Erections

As far as deck erections go, such as hatches, skylights, companionway, etc., they can be made perfectly tight if one wants to foot the bills and renew the rubber gaskets when they need it. As they are ordinarily made, they will be tight under ordinary conditions, but will not be so at sea when solid water is coming aboard.

Bulwark rails should, without question, be built without wood stanchions cut through the plankshеer, with their heels fastened to the timbers or side planking; they can be constructed perfectly well of a plank set on edge, fastened down through the plankshеer and into the upper planking strake and fitted with a cap on top. Wood stanchions make bad pockets for the collection of dirt and water, cost money to put in, cause trouble with the plankshеer in case of accident, and are provocative of leaks and rot under the deck. They always make a rail look dirty and create much more work in scraping, varnishing and upkeep. There is a limit to the height of bulwark that can do without them, but their use should be avoided wherever possible.

Spars

I think spars deserve a discussion. Casein glue, which was developed to its present standard during the war for airplane work, has revolutionized spar making. It is damp proof and water resisting, but not waterproof, and it makes a joint which is stronger than the wood itself, if properly and carefully mixed. I have never seen or heard of a hollow spar made with this glue, properly mixed, coming apart, and I can see no reason for using solid masts and every reason for the use of hollow ones.

Solid masts are heavy, twist, crack and check. As the wood dries, it must shrink around the circumference, and it cannot do so because of the solid center; therefore, in this process, the fibers tear apart, water gets into the cracks, often rots the wood and is always led inside the boat, down around the mast step. As there is no solid center in a hollow mast, the wood dries and shrinks in a normal manner and checks should not occur. A hollow mast, being built up of comparatively small sizes of wood, can be practically free from knots and defects. As far as strength goes, any extra strength the solid mast may have is unnecessary.

Contrary to popular superstition, there is no side bending, breaking stress to speak of on a mast. The sail pressure is

(Continued on page 130)

"Madcap," a Depression Ship

The Rejuvenation of a Friendship Sloop. Her Owner Had Abandoned Her and Even Her Builder Said She Was No Good

By ELWYN TABBUTT

MY BROTHER once remarked that he was used to getting something out of nothing. He did not imply that he considered himself an expert at the art but conditions had obliged him to take what he could get and make it as good as he could. This is probably why he ignored public opinion and came out with the flat-footed assertion that the Friendship sloop *Madcap* could be floated again.

Having arrived at this conclusion, I wrote to her owner and, despite the fact that several people had written him only to have their letters returned unclaimed, he informed me that she was officially abandoned and gave me title to the hull as it stood, asking only that I reimburse him as I saw fit for the sails, spars, iron keel, engine, etc.

I immediately drove to my brother's house and broke the good news (I often questioned the adjective later in the venture), and we went right down to the shore to lay our plans. A consultation with the doctor, who owned her berth, satisfied us that she was "free and clear" as far as he was concerned and a like investigation regarding the sails was also satisfactory.

For six years our ship had lain on the beach. She was built by Charles Morse around 1902 and is 26 feet long, 9 feet beam and 6 feet draft, approximately.

Thomaston's opinion of our mentality was far from flattering and even Charles Morse himself ignored the tribute we paid him when he stated bluntly that she was no good.

"You'd be surprised!" my brother informed him. "Why, Charles, her tim — "

"Do you s'pose I've been building boats for forty years and don't know whether a boat is any good or not?"

She was a sorry sight. She had been hauled out not quite out of the tide's way and ice had long since removed the blocking from under her bilge, letting her down, flattening out a place in her side and putting a bulge in her washboard. The tide ran in and out of her and there was a puddle of slimy water in her bilge; her washboards were limp and drooping and the sun had made half-inch seams in her starboard side. Her keel seemed sound, but Vernon prescribed a new sternpost.

Everything that would move had been stolen — steering wheel, the slide from her companionway, the boom and gaff and even the lanyards in her shrouds which dangled helplessly from her listed mast. She was full of old iron, bricks, trash and an engine, for which Gabriel had long since blown his horn. Her ceiling was useless, at least that in the standing room, and you could almost stick your fingers through her seams.

We cleaned out the rubbish and jacked her to her feet, expecting to hear something crack at any moment, and succeeded, much to our surprise and elation, with no damage done. Then we started tearing out rotten wood — and there was plenty!

Thomaston evinced an interest in the enterprise and we were almost never alone. We had lots of suggestions; experts in their lines offered conflicting advice; some things we did couldn't be done. "You'll have to take some plank off that starboard side; you'll never caulk those seams." "She's got to have a new keel." "Those garboards are rotten." One remark was made which went down in the history of the ship: "She's got a damn good bowsprit!" The truth of which became increasingly apparent.

On the fourth day we were interviewed by a local reporter — celebrities! Vernon was working on the sternpost; Orvel, our brother-in-law, and I were burning off paint. Shortly thereafter, upon returning from dinner, we met Vernon's brother-in-law just leaving the boat. He informed us to our horror that her bow was "all burned out." The fire department had saved the rest of her.

Outside she looked all right except for greatly enlarged seams in her starboard bow. We climbed aboard and the cuddy was all black. I was sick. The smell of that smoke made me want to pick up the tools and go home and forget that the *Madcap* ever existed. She had been nice overhead, too, varnished carlines and white ceiling with a little molding around. The molding was painfully curled up and the paint seemed to have died in agonized writhings. 'Way forward was a stinking black waste. The mast was charred, the ceiling was partly burned off, two or three timbers and five strakes of plank were destroyed on the starboard bow. The under side of the fore deck was a mass of "alligator" charcoal, the starboard knighthead was spoiled and the stem was badly charred. The port side suffered less.

I lit a cigarette. Who wouldn't have? There were people around. Damned hard luck, they said.

"Gawd!" replied Vernon, "I'm used to that, I've had it all my life!"

Then one fellow said: "When you get through burning paint, it's a good idea to sit down and have a smoke before you go home."

"Yes," quoted Vernon, "'we found that out.'"

The spell was finally broken by Vernon. "Well," he began, "I'll have to knock off on that sternpost and get this charred wood out of sight and see how badly she's burned. Elwyn, you run up to the mill and get the lumber we ordered and Orvel and I will stay here and work."

When I returned I crawled through the bow of the boat into the cuddy. Five new planks, new knighthead, new ceiling, two new timbers and patching here and there were necessary. That evening I remarked to Vernon that I had been pretty much discouraged that noon. (As a matter of fact I still was.)

"So was I, but I didn't dare say anything about it," replied he.

We put in the new timbers and fastened all the old. Not having any steam box, we obtained a dozen timbers and buried them in the clam flats until we wanted them. When we dug them out they worked like steamed timbers. We soaked a guard and rail in kerosene and wound them around the stern.

Despite the boat's age, we found sound wood almost wherever we drove a nail. We put in a new transom, new sternpost and knee. The sternpost job was rather exacting. We didn't renew it entirely, splicing it out at the transom and continuing it to the skeg. We built five two-inch oak floor timbers up from the keel, and a solid bulkhead, about a foot and a half abaft the companionway. We laid a deck from this to the cuddy at the level of the companionway sill. We worked ceiling and platform both inside the cuddy and

out, made a tiller, being too poor to buy a wheel, put five strakes in the port side, new waterway and top strake in the starboard side and planked up the hole in her bow.

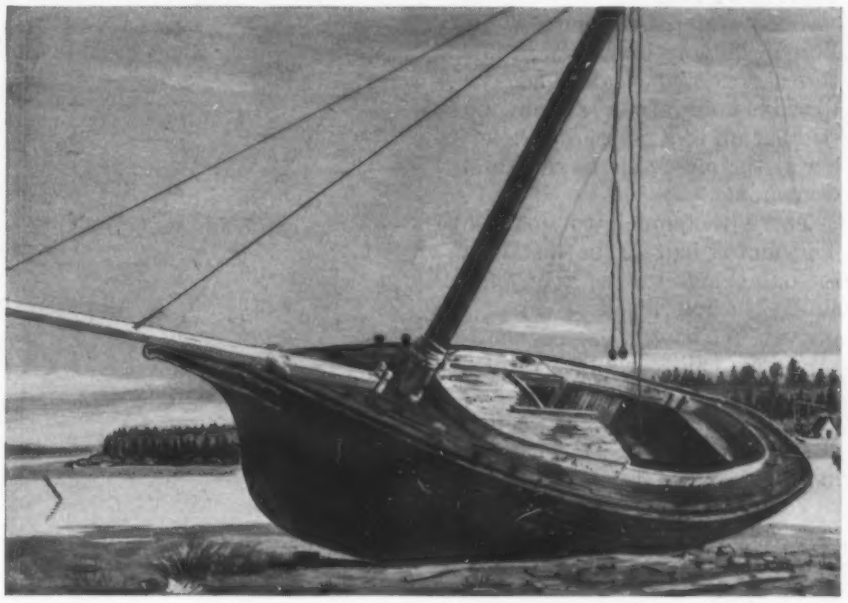
We got the paint off the hull. Pushing a piece of sandpaper around on oak planking is a mean job, like chewing up a piece of glass. Vernon started caulking. We were all eager to see how he made out with those seams which "couldn't be caulked." It took twelve pounds of cotton and I used up about twenty pounds of whiting making putty. I don't know how much paint I used in it but we had lead color, green and white in spots all over the hull. He experienced no particular difficulty in at least filling up the bad seams. We plugged the drainhole but every night tide left water in her. Of course, we had renailed her throughout and there were probably nail holes that we hadn't plugged although I had spent many an hour with a pine stick, jack knife and hammer plugging holes. We had set all our nails well in and puttied over them. It hardly seemed possible that she could leak so much from those tiny places which merely "wept" a little when the tide left her. But we found that the night tides came up over her shaft hole.

"That might make some difference," Vernon allowed.

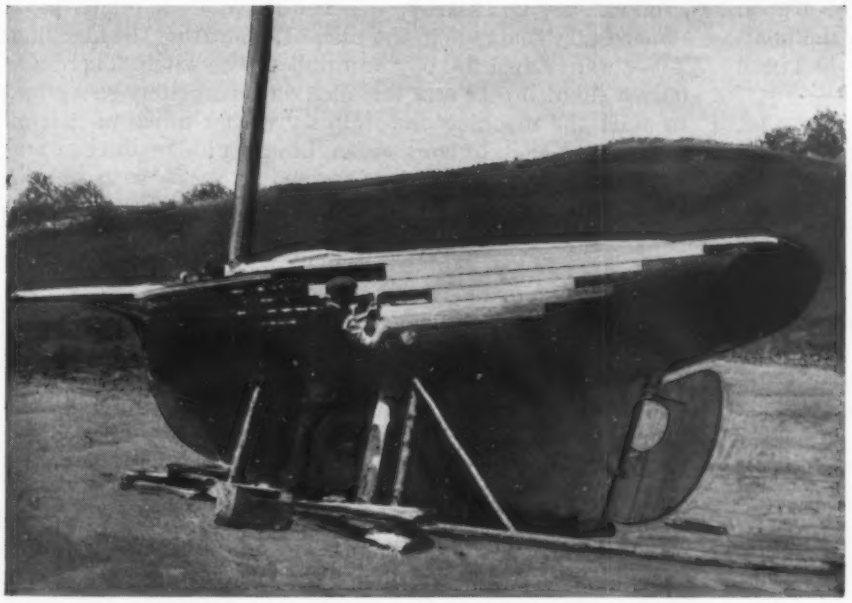
Then we had to install the stuffing box, shaft and propeller. There was a stuffing box on the boat but the nut was gone and we couldn't find one. I couldn't see paying $7.50 for a new fitting, so we had a new nut made and saved all of $6.75.

The flange on the engine took a 1⅛-inch shaft, and ours was one-inch, and too long. Besides, the threads were crippled, so we had to have the propeller end cut off and a new taper, keyway and new thread cut.

We were eager to get her overboard but first we had to have a tender. We had had few rainy days but when one finally came we bought a few boards and went home to build a tender, for which we had already drawn plans. She was to be 7 feet 6 inches long, 3 feet 6 inches wide and square-ended — a pretty boat! We worked in what rainy weather we had, but she wasn't quite complete so we returned to the sloop to make ready for the launching.



"We put five strakes in the port side"



She had been on the beach for some six years

Vernon had it all planned. We were to dig down and insert a 3-inch by 12-inch oak plank under her keel, apply a jackscrew to her bow and persuade her to take to her element. In the meantime we would have men on each side fleeting the shores. Just like that!

We put the plank under her and Orvel and I took the shores while Vernon applied the persuasion. She was rather cranky. I was afraid a shore would slip and let her down — and she had a long way to fall. We had two crabs and inserted them under each side as preventers and held her on shores which we shifted along as required.

Vernon's father-in-law, Fred Lowell, an old caulker, came down to help. He obviously felt at home at the job and kept us laughing so that we took things less seriously. He sat there smoking his pipe, watching his shores and telling stories. Vernon was helping him with the shores. I was alone on the starboard side. Orvel would set up the jack and screw it out a few turns; the *Madcap* would move an inch or two with a groan.

"There she wanders!" Fred would shout gleefully.

Fred and Orvel would build up an elaborate system of blocking behind the jack, set it, and Fred would grab the handle. About three times out of five something would slip and the blocking would have to be done all over again.

We worried her along until the tide drove us out and we believed she would float on the night tide. However, the night tide was "awful mean" and the *Madcap* stayed there. Next morning we rose at four o'clock and went down to the shore determined to push her right across the river if necessary.

We worked like ants all the forenoon but the noon tide was also "mean," merely obliging us to knock off. We believed the next tide would float her but, taking no chances, we went to work again in the afternoon and kept at it until supper time. During the two days we had moved her only a little over her length, but the beach was steep.

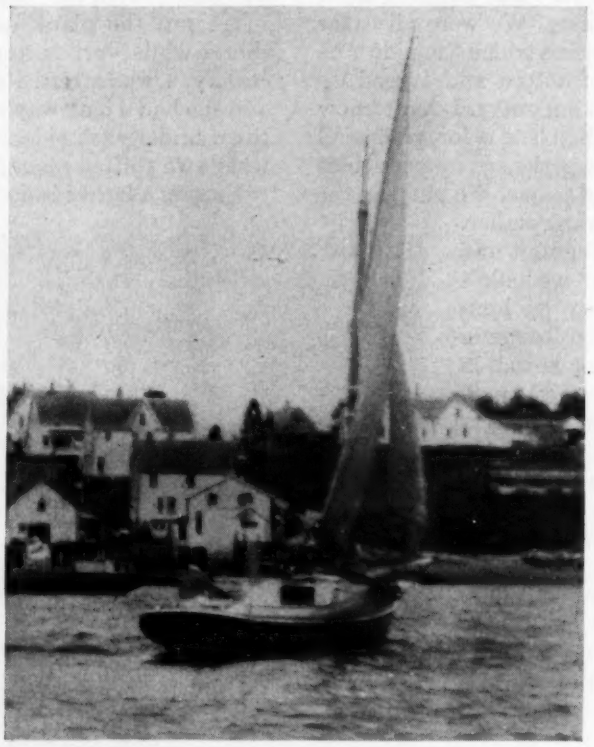
That night we went down to the shore once more. Vernon procured a dory and we awaited developments. We were alone, Vernon, Orvel and I. I parked the car with the

headlights trained on the sloop. Those were anxious moments. Soon she would be afloat, alive for the first time in six years. Probably she had given herself up a long time ago. I wonder if the old sloop felt grateful to us for our assistance?

It was quiet, a fine rain was falling noiselessly and a thunder shower threatened. Suddenly there was a splash as one of our crabs floated to the surface. We set Vernon aboard and shortly thereafter her starboard shores dropped out and she listed down. Orvel and I grabbed the dangling shrouds and pulled down while Vernon hove in on the stern line and she floated clear. Then we towed her out into the stream and tied her up to a mooring. We left her at the mercy of the river and went home.

There was much to do still. The motor had to be installed, for one thing. It was a 6½ hp. single barrel machine and a hoosier. We bought engine, shaft, propeller, coil, carburetor and a muffler for $8.00, which we felt was reasonable in view of the fact that the engine was believed to be in robust health.

Vernon built a rugged engine bed. "You know," he remarked, "the reason these two-cycle engines walk around all over the boat when you start 'em is because they ain't got a good bearing." Whereupon he fitted the bed down into the boat, letting all the timbers into it so that it looked as if it had been poured in and allowed to harden.



"Madcap's" rejuvenation contributed much to the experience of her owners

We had to call upon the former owner to start her for us, having cranked until convinced that she was a one-man engine. The man came and soon had her barking occasionally. Finally she decided to wake up and go in earnest. When she backed, water poured in through the rudder port. Vernon caulked the rudder casing but still it came in, right up over the top. Well, we didn't plan to reverse her much, anyway.

"Let's go down river and try her out," suggested Vernon.

So we cast her off and cranked the machine. She went. When we talked, we stuttered. The end of the bowsprit and the masthead gyrated in six-inch arcs and the *Madcap* shook like a wet dog. She was light but we wondered if ballast would steady her enough to enable us to sit down without being thrown all over the boat. That was a noble engine! It stood three feet high on a base thirteen inches square — "Big Bertha."

We flounced down river a few hundred yards, put about with a flourish and flounced back again, Thomaston echoing and reëchoing to the strains of Bertha's robust voice. The old boat tore along at five or six miles but I was beginning to worry lest ballast fail to quiet her. We trusted, however, that it would curb her somewhat.

We next turned to the rigging. All her running rigging and blocks were gone. I got nearly all the blocks we needed, besides some deadeyes and other trinkets, for $3.00 from an old fisherman at Tenant's Harbor who had dismantled a Friendship sloop. Five dollars bought rope for the running rigging. One of our shrouds had parted about four feet above the deck so we put the deadeye there and rove longer lanyards. It didn't look very shipshape but we couldn't afford to be too æsthetic.

The sails were in fairly good shape but we had to rerope the jib luff. The wire luff rope had broken and rusted and rotted the cloth.

We boated ballast rocks aboard in our skiff. Later, we replaced the rocks with iron. We were about ready for our trial run. It was a comfort to learn that her ballast didn't increase her leaking. She was abnormally tight, leaking only a few quarts a day, which was negligible.

We bent the sails and the mainsail looked as if it had been made for a 35-foot Cape Cod cat. "Say, that's an old Godder, ain't it!" Vernon exclaimed. Sometimes the English language is a clumsy medium in dealing with the extreme, and profanity is an instrument not unlike the *n*th power in mathematics.

One day thereafter there was a little air from the nor'west, so we decided to drop our mooring and go down in the bay to see what would happen. We started up the mill and in due course of time, after the wheel had built up a pile of water astern so that she could coast downhill, the *Madcap* moved. Fortunately ballast had placed Bertha almost completely under the *Madcap's* control and her contortions were somewhat subdued, as, necessarily, was her movement, rendering it unnecessary to hustle to the tiller after starting the machine.

We went down the bay and pulled the switch. There was only a slight breeze and this died out completely so we had to start the machine and didn't give her much of a trial.

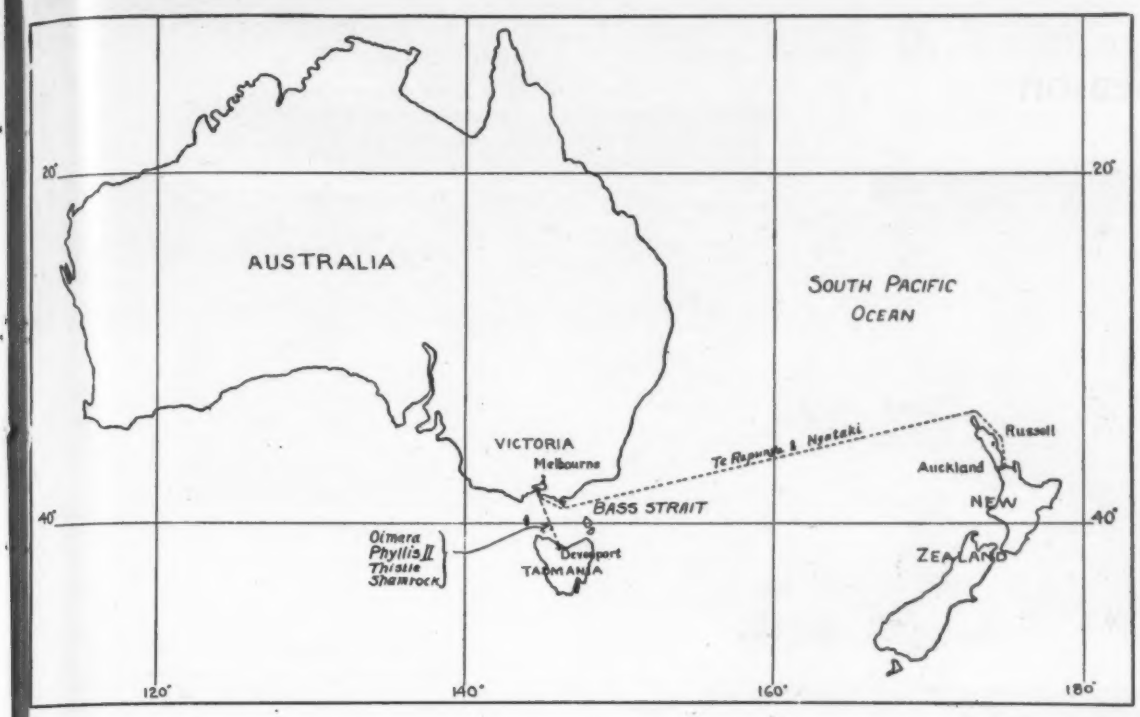
We went back to work again, building an engine box and fixing this and that. Things seemed to move with painful slowness. We put on new coamings between the cuddy and the jib sheet bitts, which stiffened the washboards remarkably. We scraped, caulked, primed, puttied and painted the decks. Vernon made a new hatch cover, the satisfactory operation of which was achieved only through tiresome work.

We scraped down the mast and greased it, painted the boom, gaff and masthead. I scraped the burnt wood out of the cuddy, and a disagreeable job it was inasmuch as the results merely reminded me that this work should have been unnecessary. When finished, I gave the cabin three coats.

Our objective was to make her ready for sea regardless of comfort and appearance. We had worked practically all summer and wanted to try her out if we had to leave some things to do later, and it wasn't long before we were ready to leave Thomaston behind and go to Tenant's Harbor.

We cast off and set out on the ebb tide. There wasn't a breath of wind and we had to run the engine all the way. The distance is eighteen nautical miles and the old motor pumped her along, stopping only twice because of the stationary electrode, which was a delicate thing to adjust. At last, it seemed, we had the old *Madcap* ready for sea! The old engine had pounded her for four hours and she didn't leak any more than usual. We could use her now, and we did, though there were a lot of things still to be done.

And the old *Madcap* had been abandoned! She had been left on the beach and now she's the tightest native boat in the harbor. We have a boat and a lot of fun and experience to our credit. And the cost was only about $150.00 in cash.



Sketch chart showing the stretch of 1,630 miles traveled by the two racers which started from Auckland, and the shorter route from Devonport to Melbourne across the boisterous waters of Bass Strait

Below. The German ketch "Te Rapunga" which covered the course from Auckland to Melbourne in 19 days, ½ hour. Despite a delay of 44 hours on the beach at Russell, where she was caulked and repaired, she defeated "Ngataki"

Bottom. "Oimara," a veteran ocean racer, took first place in the race across Bass Strait, closely followed by "Phyllis II"

Ocean Racing in Australia

By

NEVILLE G. COLEMAN

JUST a few months more than a century ago, a certain seagoing English farmer, one John Batman, entered Port Phillip Bay after a protracted voyage from a British settlement in Tasmania, finally tied up to a tree on the bank of the River Yarra, and concluded the entry in his log book with the comment, "this will be the spot for a village." Today, "the village" is Melbourne, capital city of the State of Victoria.

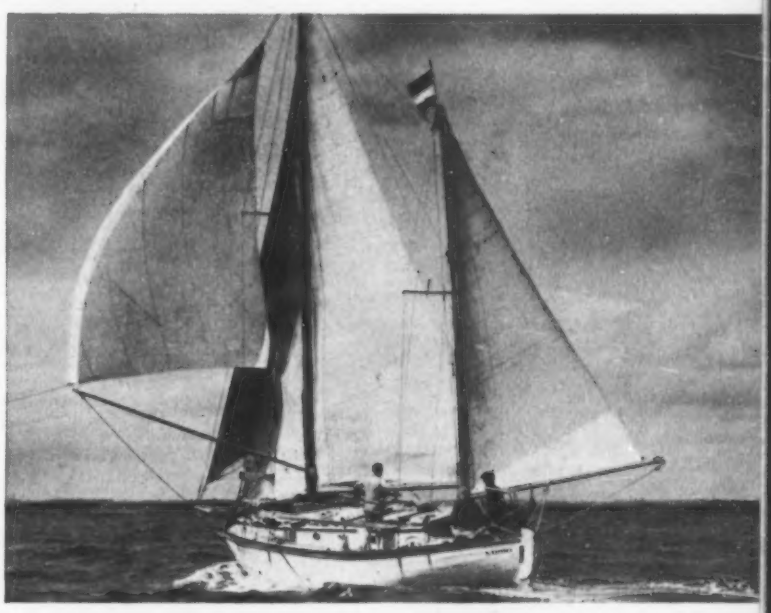
As any excuse is good enough for another drink, Victoria decided to celebrate its centenary. Several events of wide interest were a part of this celebration, among them the visit of a Royal Duke, and the air race from London to Melbourne. But the real climax, from the yachtsman's point of view, was the Centenary Regatta held in December and January, covering two weeks of yachting which included 66 events. Prize money totaled £1400 (normally and nominally about $7,000). The events most interesting to yachtsmen in other parts of the world were undoubtedly the Auckland (New Zealand) to Melbourne and the Devonport (Tasmania) to Melbourne ocean yacht races.

Ocean yacht racing in Australia has been a sickly, puling child. Born about 1906, it essayed a race across Bass Strait which proved so strenuous that the poor infant relapsed into a comatose condition until it was attended by "Doc" Bennell, a Melbourne professional man, who, by a transfusion of energy and enthusiasm, revived it to the point of another Bass Strait effort in 1929. Five yachts started in this race, which was won by Mr. Bennell's 43-foot yawl *Oimara* (Gaelic, meaning "Maid of the Sea") from *Maysie*, *Phyllis I*, *Shamrock* and *Wanderer* (of Sydney).

Having nursed the sport in Australia into convalescence, Mr. Bennell sailed *Oimara* across to New Zealand in 1931 and raced back from Auckland to Sydney, Australia, finishing first, but being defeated on handicap by Erling Tambs in the ill-fated *Teddy*. The 35-foot cutter *Rangi* also was an unofficial entrant in this race.

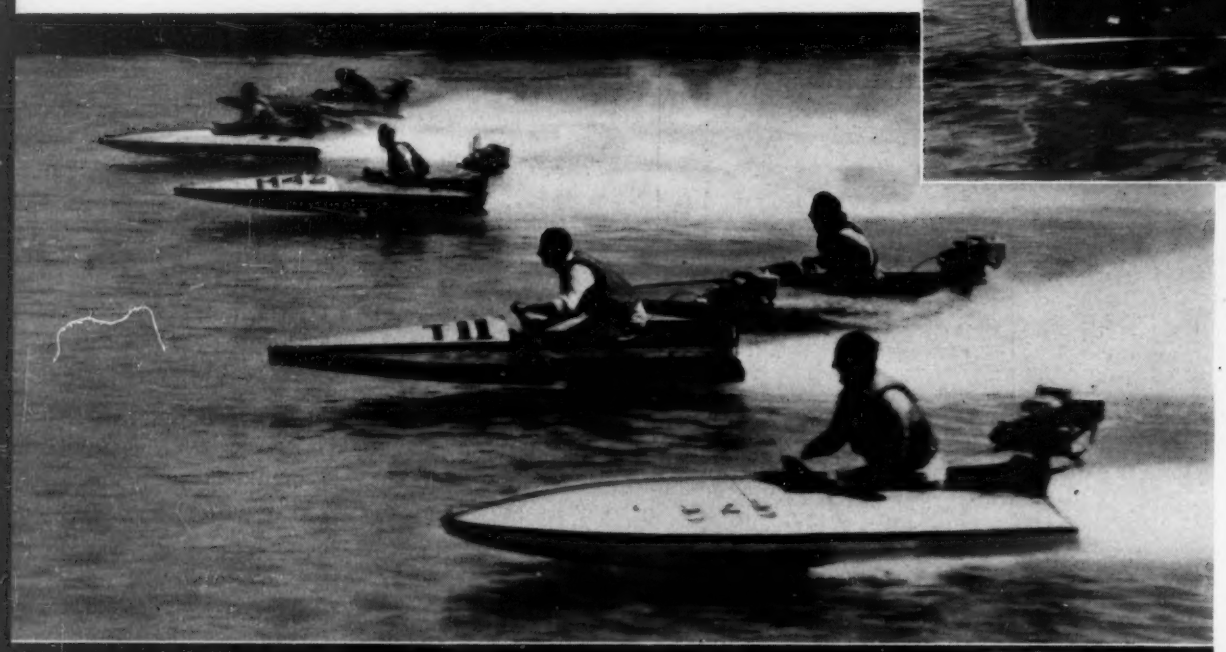
When the Centenary Celebrations were first projected, Mr. Bennell pressed the claims of his nautical foster child so energetically that both the New Zealand-Melbourne and the Tasmania-Melbourne races were included in the program.

(*Continued on page 118*)

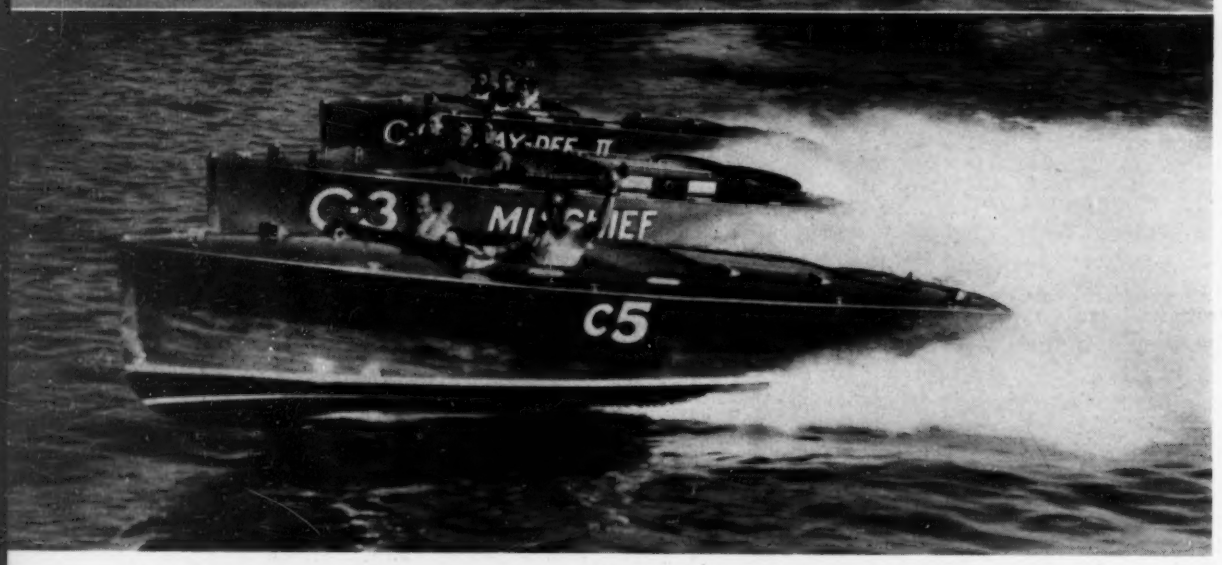


Speed Boats Open Season

"Neddy," J. M. L. Rutherfurd's new speed boat, won the free-for-all runabout event at the Biscayne Bay regatta



Left. The outboards hit the starting line in the race for the Colonel Green Trophy. Marshall Eldredge, the winner, is nearest the camera



Left, center. Start of the 850 Class at Miami. H. Herbert Mendelsohn's "Madoshumi V" (C 5) won this event and thereby secured another leg on the Wanamaker Trophy

Below. Class E runabouts compete at Palm Beach. Jack Dunn's Chris-Craft (No. 9) hung up a world's record at Miami a week later with a speed of 39.375 m.p.h. for five miles in competition

The Month in Yachting

Engelbrecht

A few of the contestants in the final heat of the North Florida Moth Class championship regatta

Annual North Florida Sailing Championship Regatta

SLOAN WILSON, of Ormond Beach, Fla., and Rogers Rock, N. Y., sailed his *Little Dipper* to victory in the Moth Class series, the major event on the program of the second annual North Florida Championship Sailing Regatta, held on March 3rd, at Ormond Beach. Joe Michael, of Melbourne, Fla., at the tiller of *Miss Maxine*, placed second.

Fine sailing weather greeted the skippers as they lined the dock and the gun sent the first group over the triangular course. There was a representative fleet of boats assembled for the races which were keenly contested and proved interesting. A light breeze from the north prevailed all morning but veered to northeast at noon at which time the judges reversed the course so that there would be more windward work.

The Moth championship was sailed in three heats and a final, the winning boat of each heat dropping out to reenter the final. The first heat went to *Miss Maxine*, with Joe Michael, of Melbourne, Fla., at the tiller; the second was won by *Dixie Starlight*, with Marston Keeler, of Ormond Beach, Fla., and Jamestown, R. I., as skipper; the third brought the *Little Doris*, sailed by James L. Rick, Jr., of Rockledge, Fla., over the finish line first.

The start of the final in this event found six boats jockeying for position with *Miss Maxine* in the weather berth approaching the line. She slid around the first buoy in the lead, but *Little Dipper* passed *Miss Maxine* in rounding the second mark and held the lead, to cross the finish line several lengths ahead.

The Sail Area Class was won on points by *Sea Gull* with her owner, Alfred Michael, of the Melbourne Yacht Club, Melbourne, Fla., at the tiller. *Naiade*, sailed by E. G. Wager, of Titusville, Fla., was second. The latter has carried off all honors in her class on the East Coast this season.

There were three heats in this race and a beautiful finish capped the third. The heat was won by *Sea Gull* with all boats footing well at the gun. The *Naiade* gained on *Sea Gull* on the run to the second mark, where she made a short tack, but coming down the third leg *Sea Gull* pulled away from *Naiade* and went over the line, leading by less than a length.

Barbara Gartner, of Daytona Beach, Fla., was defeated in the girl's race by 12-year-old Leta Van Sant, of Daytona Beach, Fla., and Atlantic City, N. J. She was at the tiller of the *Little Bear*, a new Moth designed by her father, Captain Joel Van Sant, originator of the class, and recently built by Lester Leonard, of Daytona Beach. This is the first meet in which the new boat was a competitor.

Maid of Maitland, skippered by L. T. Chipman, of the Orlando Yacht Club, crossed the finish line first in the Leonard One-Design Class, with *Little Dipper* close on her heels.

The final race on the program was a Moth Free-for-all in which Alfred Michael again sailed *Miss Maxine* home first, and James Van Sant brought the *Little Bear* in second.

Judges for the races were Commodore James L. Risk and Captain George Gingras, of the Indian River Yacht Club, Rockledge, Fla.; Lester Leonard, of Daytona Beach, Fla.; Albert F. Wilson, Commodore of the Rogers Rock Yacht Club, Rogers Rock, N. Y.

VIRGINIA HOLZDERBER

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Busy Times Ahead

WITH an invasion of either Scandinavian or German yachts, perhaps both, threatening, the 30-Square-Metre Association, which now numbers over twenty boats and is one of the largest open rating classes in the country, is preparing for a strenuous season. In midsummer fourteen races will be jammed into eighteen days.

Following the usual club races of the preliminary season, the fleet will rendezvous at Marion on July 23rd for three days of hard racing in Buzzards Bay in the second series for the President Roosevelt Cup. These races will be held under the auspices of the Beverly Yacht Club, whose late vice commodore, H. Nelson Emmons, secured the Chief Executive's sponsorship.

The fleet will then run over to the Vineyard, most of the yachts racing through Quick's Hole for the two-day regatta of the Edgartown Yacht Club on July 26th and 27th. Following this there will be a 110-mile ocean race around Cape Cod from Edgartown Light to Marblehead Rock. The run will bring the fleet into the yachting capital with plenty of leeway to haul out for the seven races of the midsummer series of August 3rd to 10th, and to repel the foreigners in an international series — in case they show up.

W. U. SWAN

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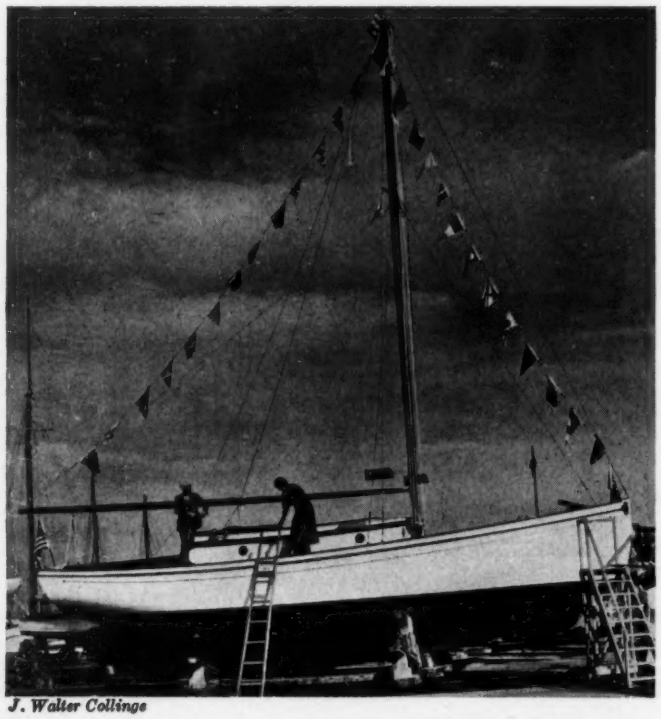
Speed Boats Race in Florida

RACING men gathered for the annual Washington's Birthday regatta of the Palm Beach Yacht Club and staged a number of exciting contests. Gar Wood, Jr., won the Class A outboard event, Class B honors went to Marshall Eldredge, Fred Jacoby took first place in Class C, and Sam Crooks cleaned up in Class F. In the "151's," Frank Ripp was first with *Bayhead*, after a hard tussle with the veteran Elmer Johnson at the wheel of *Sparrow*. *Neddy*, a new racer owned by J. M. L. Rutherfurd, took two heats of the "850" contest, H. H. Mendelsohn's *Madoshumi V* capturing one.

The fastest time of the meet was made by Jack Dunn's *Jay Dee* (ex-*Nuisance*), an old Gold Cup boat, which won the free-for-all at a 47.39-mile pace. *Madoshumi* was a close second in this event.

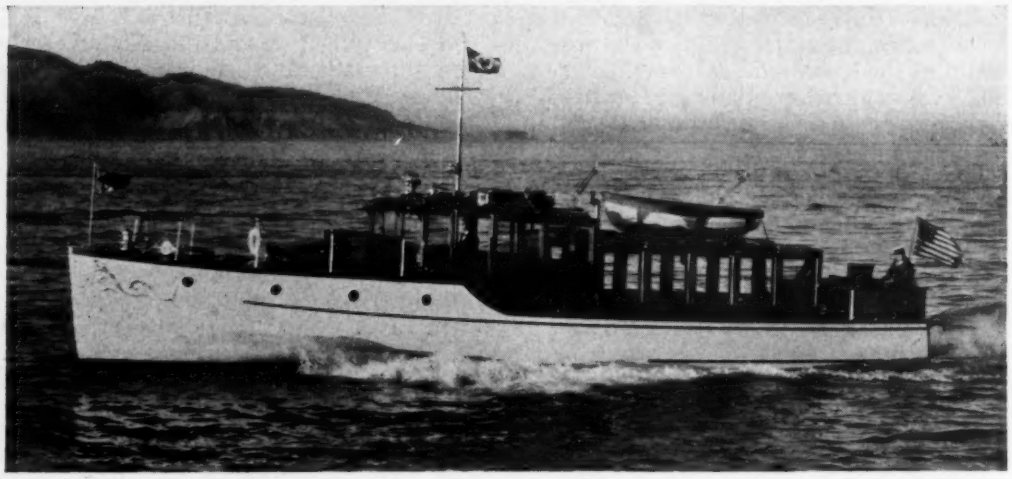
Ten runabouts competed in Classes



J. Walter Collings

Above, left. Joe Fellows' new 35-foot auxiliary "Universal." She carries two Universal Flexifour motors. Fellows & Stewart, San Pedro, built her

Above, right. "Lady Luck," a 48-footer powered with an 80 hp. Cooper-Bessemer Diesel. Chute and Bixby built her from designs by Stanton G. Tiffany



Right. The 53-footer "Moorease," owned by Joseph A. Moore of San Francisco, doing 16 miles on her trial run after being lengthened and repowered with a pair of Kermath Sea Wolf motors

E, F and G and the winner was Jack Dunn's Gray-powered Chris-Craft. H. Paul Prigg's boat, also with a Gray, was a close second. Dunn also cleaned up in Classes C and D runabout events. The Doherty Trophy for high score went to M. Vaill with 2906 points, Prigg being second with 1800.

At Miami, March 2nd and 3rd, many of the same boats met again in the twenty-second annual Biscayne Bay regatta. Marshall Eldredge won the Colonel Green Trophy for outboards, and Gar Wood, Jr., took first place in Classes C and D runabouts, Sam Crooks acting as his mechanic. He also took the invitation Class E runabout race. The open event in Class E went to Jack Dunn's Chris-Craft *Well Done* and a new record was hung up, a speed of 39.735 m.p.h. for five miles in competition. Prigg was second.

The Wanamaker Trophy race in the 850 Class went to *Madoshumi V*, and the free-for-all runabout race was won by Rutherfurd's *Neddy*. First place in the final contest, the grand free-for-all, went to Louis Nuta of Miami.

Keep This Date Open

ON MAY 28th a special meeting of the Society of Naval Architects and Marine Engineers will be held in the Engineering Societies Building, 29 West 39th Street, New York. The meeting is open to all yachtsmen. A paper on the evolution of measurement rules, by W. P. Stephens, will be read at the afternoon session. There will be a dinner in the evening, after which Charles Paine Burgess will read a paper on the modern racing yacht. A discussion will follow each paper.

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A Correction

ON PAGE 60, February YACHTING, in the article "Some Cruises and Harbors in the Bahamas," the sentence at the bottom of the second column should read: "Abreast of Bridge Point . . . steering *for* Bridge Point on a S or S by W course." If one contemplates cruising these waters, it would be well to note the correction for future reference.

Richard F. Hoyt

RICHARD FARNSWORTH HOYT died in New York on March 7th, following an operation. An enthusiastic sportsman, he was interested in aviation and, more particularly, in speed boat racing.

With *Teaser*, in 1925, he set a record for the run from New York to Albany and return that still is unbroken. He competed for the Gold Cup a number of times, winning this coveted trophy in 1929 and 1931, also capturing the President's Cup twice and the National Sweepstakes once with his speed boats *Imp* and *Hotsy Totsy*.

Nashira, pioneer fast cruising yacht of the houseboat type, was built for him in 1925 and was the first of several similar craft which combined liberal accommodations with high speed. While using her for his cruising, he thought nothing of making the run from Port Washington to New Bedford in his speedy runabout *Teaser*.

Mr. Hoyt's clubs included the New York Yacht and the Creek.

Thomas White Ratsey

YACHTSMEN the world over will learn with regret of the death of "Tom" Ratsey, of Cowes, Isle of Wight, on March 4th at the age of 83 years.

The name of Ratsey has been associated with the history of English yachting from the early days of the sport, but for the past half century it has been best known in connection with sail making, this business having been established in Cowes by George Rogers Ratsey in 1769. To the present generation the name is associated with the immediate personality of Thomas White Ratsey, born in Cowes on July 4th, 1851.

Every one of the fifteen challengers for the America's Cup has been canvased by the firm of which Mr. Ratsey has been a member from his early years. In 1902 he established an American branch at City Island from which have come most of the sails for Cup defense for many years past.

Others may in the future make as good sails, but no one can fill the place left in yachting and in the hearts of his friends by Thomas W. Ratsey.

W. P. STEPHENS

+ + +

Aaron deRoy

THE death of Aaron deRoy, in an automobile accident early last month, has removed one of the most prominent yachting men on the Great Lakes. An active member and a former officer of the Detroit Yacht Club, he owned a number of fine motor yachts. He also did much to promote motor boat racing, having been twice winner of the Junior Gold Cup, with his *Lady Helen* and *Lady Helen II*, in 1924 and 1926. In 1932 he presented the trophy which bears his name, first raced for at Montauk by Gold Cup boats. He was the owner of *Hornet*, which was a contender in the race for the Gold Cup last year, and he had entered a challenge for the same trophy for 1935. With his keen interest in speed boats, he was a familiar figure at most of the important regattas.

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A New Rig for the Six-Metre "Viking"

WITH three or four American Six-Metre yachts racing in Bermuda waters this month for the Prince of Wales Cup and the Royal Bermuda Yacht Club Trophy, and foreseeing tougher competition in sailing against newer boats, the two Triminghams, Eldon and Kenneth, have taken steps to improve the speed of their "Six" *Viking*, which in their hands has been the outstanding boat in the class at Bermuda. They commissioned *Viking's* designer, Bjarne Aas, to draw a new and more modern sail plan. His prediction

(*Continued on page 132*)

"Berania," Miss M. B. Carstairs' 57-foot British built twin screw commuter, on her recent visit to Miami

Below. "Viking," Six-Metre owned by Eldon and Kenneth Trimingham of Bermuda, with her old rig

M. Rosenfeld

Below, right. The late Thomas W. Ratsey, of Cowes, England

Big Racing Season At Hand

By

GEORGE W. SUTTON, JR.

NO SEASON ever dawned more brilliantly for the sport of motor boat racing. It is apparent that both in our domestic racing and in international competition the summer months are going to be packed with interesting events.

Florida has started things off in very fine fashion indeed. Well planned and well run sanctioned regattas at Jacksonville, New Smyrna, Palm Beach, Miami Beach, Bradenton, Clearwater and other southern spots were attended by a surprising number of A.P.B.A. officials and an equally surprising number of the very best amateur and professional inboard and outboard drivers from 500 to 2,000 miles away. The regattas in some cases were operated by groups entirely new to the motor boat world, in other cases by experienced old-timers who know what it is all about. The splendid enthusiasm of all of these Florida groups deserves the utmost encouragement and, if continued during the next few years, means that each season will begin in February with a brilliance that will carry well over into the season further north and have an excellent effect upon it.

The northern season this year is shaping up so well as to warrant predictions that it may be the best ever experienced. There will be at least one new boat in the Gold Cup race — now being built for Herbert Mendelsohn, of Detroit, to the 1935 rules with a new 732-cubic-inch (12-litre) engine. There will be 225-cubic-inch hydroplanes all over the place. This class is certain to have a sky rocket growth this year and, if not spoiled by the commercialism of a few owners, may form the backbone of most sanctioned regattas for several years to come. The class is attracting wealthy people and those not so wealthy alike. That was exactly the intention of its sponsors.

There is going to be a great deal of excitement in such events as the National Sweepstakes and the various free-for-all races included on many of the regatta programs. Racing against the old and new Gold Cup boats we shall find Melvin Crook's big *Betty V*, Louis Trotta's new Liberty-powered craft which made her début in Florida, and John M. L. Rutherfurd's new 1936 Gold Cup boat *Big Duster*. This may easily be the most spectacular boat of the year. Built by Adolph Apel, with a very light hull which is something of a larger version of the Apel-designed record-breaking 125- and 225-cubic-inch hydroplanes *Emancipators II* and *III*, *Big Duster*, with a red, white and blue color scheme, will be fitted with one or two Packard Gold Cup motors now in Mr. Rutherfurd's possession. She should be able to make approximately 75 miles an hour. This, of course, is ten miles or more under the speeds of the Italian 12-litre boats but, since Jack Rutherfurd is a careful, skilful mechanic and driver and since his boats have a habit of finishing races they start, he may be able to offer them serious competition. You will remember that he got second place in the international races in Florida last year solely through the reliability of the old *Imp* although she was perhaps 25 miles an hour slower than the fastest of the 12-litre craft.

It is Mr. Rutherfurd's intention to form a family racing team by the addition of a "225" hydroplane named *Little Duster* to be driven by Mrs. Rutherfurd who is unquestionably the leading American woman motor boat pilot of the moment. The Rutherfurds intend to take both boats to Europe, will participate in the 240-mile Hungarian marathon from Vienna to Budapest, June 14th, with *Big Duster*, then race both boats in the subsequent Budapest, Paris and British Royal Jubilee regattas. They will return here in time for the National Sweepstakes, the international regatta at Detroit and the President's Cup in Washington.

At least one other American motor boat sportsman intends to race a "225" hydroplane in Europe this year, beginning with the regatta at Potsdam, Germany, May 14th, and taking in the Budapest and Paris events. The organization of the European committee to arrange all details of an invasion of American boats and drivers this year is progressing splendidly under the very able management of Maurice Pauwaert, secretary of the International Motor Yachting Union. Plans are under way for the departure of an outboard team consisting of Sammy Crooks, Lewis G. Carlisle and George Coleman. It would be difficult to provide a better team than that. Sam Crooks, as you know, was the national

(*Continued on page 118*)

The High Clewed Sprit Mainsail

By

R. N. BURBANK

THIS sail embodies some features already tried out and some original ones. The combination of sail and rig, which I first drew in its present form in 1932, is somewhat out of the ordinary. Whether it is good or bad, those interested may determine. The drawing shows the rig on a Six-Metre type hull, while the photographs of some "back yard models" show the non-twisting qualities of the sail at different angles with the wind.

The principal advantages of the rig as I see them are: A sail which will not twist from head to foot when on the wind, with started sheets or even with the wind aft; the sail, with its long luff, is effective on the wind; rigged as shown, it cannot "goose-wing" even when jibed all standing; the end of the sprit cannot foul the permanent backstay, as it cannot lift, being controlled by a guy; there is less likelihood of an unpremeditated jibe as the sail stays in one plane and the wind has to get behind it all before it will go over; with the high clew, the sail cannot drag in the water, unless the situation is desperate, and the sheet stays out of water when before the wind in light air; wind can pass under the mainsail and into the spinnaker, which is a help, particularly with a parachute spinnaker; the draft of the sail may be altered by the outhaul purchase worked from the deck.

Now for the disadvantages. The first is, of course, its unconventionality; another is the width of the split sprit, though this may be overcome by some form of folding sprit; a third is the higher center of effort of the sail as compared with the normal type. However, I have tried out this sail against another of conventional type, on models built as nearly alike as possible, and was surprised to see both models take practically the same angle of heel on the same courses. Some day I hope to learn more about this.

Any form of double, or single offset, sprit may be used, provided that it is light enough and does not cut the sail. As weight is always undesirable, especially when the sprit is hoisted with the sail, the lightest sprit which will work is the one to use. The "snowshoe" sprit is one I devised some years ago. I have tried it out in model form and have tested it for strength. The diamond form seems to have possibilities. In a test of two similar sprits, three cross rods added to one of them increased the strength more then seven times. These rods pass through holes in the sail, large enough not to foul when going about, and are easily detached from one side of the sprit so that the sail may be bent and unbent quickly. (A long hook and eye works well.) The holes in the sail need not be excessively large.

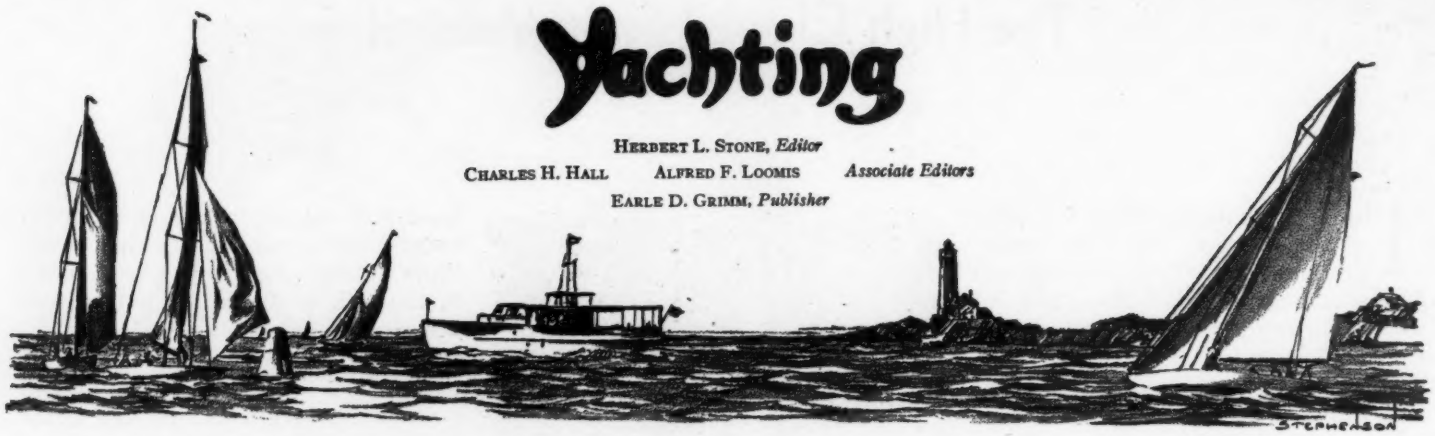
The controlling guy, of flexible wire rope, leads from the outer end of the sprit to a block near the foot of the mast. It controls the twisting of the sail, leaving the foot free, and prevents the sprit from lifting too much. Using this guy, it is unnecessary to trim the main sheet in hard to keep the leach from falling off to leeward.

As the clew of the sail is so far off the deck (it might be anywhere from where I have shown it to the height of that of a "main trysail"), a sheet led to the center line might have to be strapped down hard to get the sail in close enough for work on the wind. I have indicated a method which I have found to work well — pulling automatically from the weather side by a bridle with a fixed eye. Another wrinkle would be to use a single flexible wire rope sheet led from the bridle through a single block on the end of the sprit to the shackle of a single block traveling on the controlling guy, the two parts from this block passing through lead blocks at the foot of the mast, one part for hand hauling, the other being led to a winch. Thus there would be only a single part to run out in a light air, yet enough power to handle the sail in a breeze.

The double sprit, so high on the sail, allows something to be done which I do not think has ever been tried without using long battens. With a light line and leaders on the sail, it is possible to put a curve in the sail up to practically the full draft when there is not enough air stirring to fill it. This gives greater efficiency when the draft is most needed — and is absent, the sail hanging in wrinkles. This line is handled from the mast within easy reach from the deck. When slacked off, it does not interfere with the normal

(*Continued on page 119*)

Top, wind abeam; center, on the wind; bottom, wind aft. Note that the head of the sail does not fall off to leeward



EDITORIAL

An Encouraging Sign

ONE of the most heartening signs of returning confidence is the increased activity in the building of new yachts which has brought much needed work to the yacht yards, many of which have had a lean time during the past four years. This does not mean, of course, that the yards are filled up or have more than they can do, and the returning activity has been confined chiefly to small and moderate sized yachts, the largest of which, perhaps, are the two new Twelve-Metres building for next season's racing, and a large yawl for a Great Lakes yachtsman.

But a canvass of the situation among the yards shows many of them with all the new work they can turn out for next summer's use, and a number of the naval architects are busier on actual or prospective work than they have been in several years. The new work under way includes several small one-design classes for different localities and a number of standardized motor sailers and auxiliaries. The bulk of the new work, of course, is in boats of the cruising type.

Among the manufacturers of stock boats, the increased activity is also apparent, and more work is under way at their plants than at any time since 1930. Which is a most encouraging sign and the harbinger of an active season afloat.

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The Twelve-Metre Class

SPEAKING of the two new Twelve-Metre Class yachts now under construction, it should be remembered that these are the first two yachts in this International Class that have as yet been both designed and built in the United States. If we are ever to take part in the international racing in the class, it is essential that we build up a fleet of these yachts in this country. Therefore, the two owners of these new boats deserve credit for being the first to start the ball rolling.

One of these "Twelves" is from designs by Clinton H. Crane (designer of the *Weetamoe*) for Van S. Merle-Smith, and is building at Nevins Yard, City Island. On a water line length of about 44½ feet, she is somewhat longer than the others in the class, and her performance will be watched with interest. The other is from designs by L. Francis Herreshoff for W. J. Strawbridge, former owner of the fast *Istalena*, by the same designer. The Herreshoff Company at Bristol is building her. Both should be under sail by the end of June.

These two boats will bring about a revival of interest in the "Twelves" which will add much to the racing season ahead. Horace Havemeyer's Nicholson-designed *Mouette*, long the outstanding yacht in the class, is having some alterations made in her rig in anticipation of a tough year ahead, and Bayard Lichfield's *Cantitoe*, an Anker design, will also be out. Clifford Mallory's and W. A. W. Stewart's *Tycoon* and *Iris* are both expected to be in commission, according to those interested in the class, and Charles Harding's *Anitra* will probably be seen at the starting line if the others are all there. With some seven boats racing, good sport is assured.

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Rumors of a Challenge for the America's Cup

LAST month rumors reached this country through the press that a challenge for the America's Cup was a likelihood in 1936. The story, as printed, was that C. R. Fairey, owner of the *Shamrock V*, was considering building a new Class J yacht with which to challenge. So far as we know at this writing, the matter has not passed beyond the conversation and rumor stage. As one of the foremost and successful racing men in British waters, Mr. Fairey, who has won several championships in the Twelve-Metre Class, might well consider challenging, and would be a logical contender. He was at Newport last year during the America's Cup match and saw the game as it is played here. But, according to the deed of gift of the Cup, he does not have to challenge until ten months before the date proposed for the match. Even if he is contemplating an invasion of our waters during 1936, with the Cup in view, he would not have to challenge until next Fall. It is unlikely that we shall hear anything definite until that time.

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The Transatlantic Race

THE hold that racing has on your blue water yachtsman is evidenced by the interest in the forthcoming race from Newport, R. I., to Bergen, Norway. Over a course that should, at the time of year it will be sailed, test the skill and endurance of crews and the ability of the yachts, berths on the contestants are eagerly being sought.

Much of the course will be in high latitudes where in early June the weather and the water will both be cold and the breezes strong; while if one elects to take the shortest course and cut over the Grand Banks the menace of ice is always present, as Alfred Loomis points out in an article in this issue of YACHTING. Yet five American and one Norwegian owner have already entered or signified their intention of doing so, and the probability of a German yacht being at the starting line is bright. There will be others before the entries close.

IN THE WORLD OF YACHTING

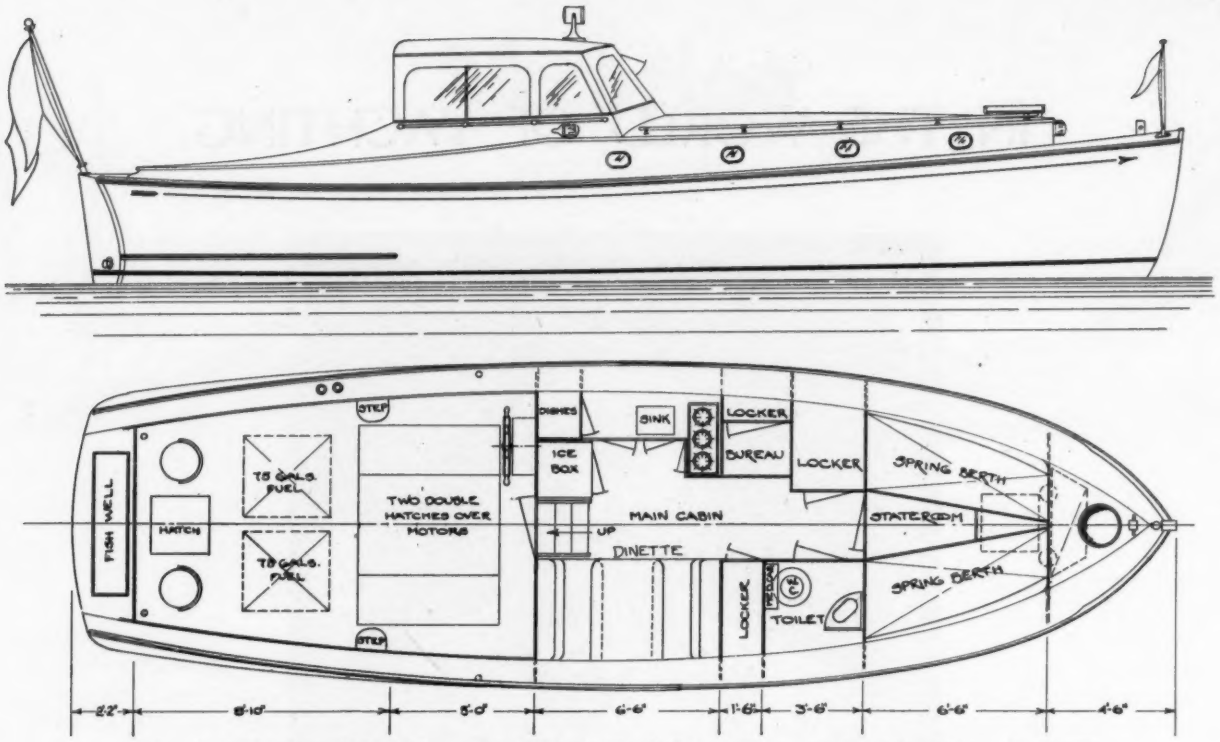
E. C. (TEDDY) GOSLING

BERMUDA has produced some excellent racing skippers, as many American yachtsmen have found to their sorrow when they have met them either in Bermudian waters or on Long Island Sound, when the 'Mudians have brought their boats here on occasion to get a little outside competition. Among these, E. C. Gosling, better known as "Teddy," ranks well up. Owner and skipper of "Long Tail," one of the Bermuda One-Design Class, he has done his share of making the going rough for the Long Island Sound Interclub teams that have "taken on" the Bermuda One-Designs every year since the two classes were organized. The annual team match between yachts of these two classes is one of the features of the spring racing season in Bermuda each year. One of these series will be sailed early in April in Great Sound.

In addition to being one of the "headliners" in the Bermuda One-Designs, "Teddy" is often found in one of the Bermuda "Sixes," which also have been hard nuts in recent years for the U. S. "Sixes" to crack.

A former commodore of the Royal Bermuda Yacht Club, and a member of several of the race committees that have handled the biennial race from New London to Bermuda, "Teddy" Gosling is extremely popular with American yachtsmen, and an ideal host to them in his home waters.

If Bermuda yachtsmen had been eligible for consideration in the unofficial list of Ten Best Racing Skippers, the names of several of her sailors would undoubtedly have been found there.



Outboard profile of fast fishing boat now building at Nyack, N. Y. She is scheduled for delivery April 15th

A Fast Stepping Sport Fisherman

THIS trim looking motor boat is now nearing completion at the yard of Julius Petersen, Nyack, N. Y., for a Philadelphia yachtsman who does not wish to disclose his identity at present. She is from designs by Chris. B. Nelson, Inc., of New York, and her principal dimensions are as follows: Length over all, 38′ 6″; beam, extreme, 11′ 10″; draft, 2′ 10″. Construction is high grade, the boat being framed with oak and double planked, the inner planking being of white cedar and the outer of Peruvian cedar. Trunk cabin and all deck joinerwork are of mahogany.

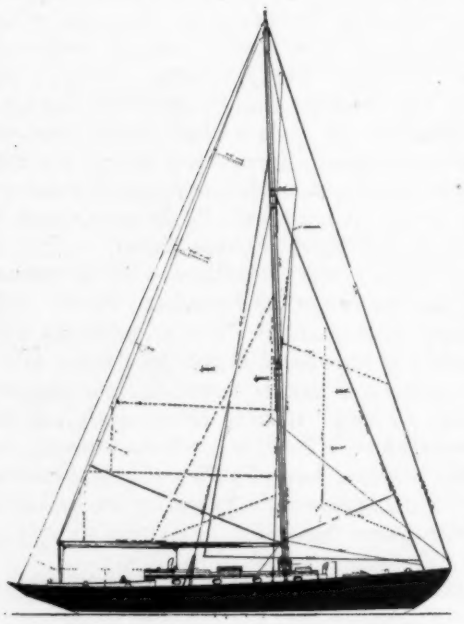
The motive power is a pair of 106 hp. Chrysler engines, with reduction gears, which will give the boat a speed of 19 to 20 m.p.h. As she is intended to work offshore and to make trips from the Florida coast to Nassau, she is designed to meet bad weather and to maintain good speed even in a blow. For handiness, twin rudders are fitted.

The deck shelter is open aft and the cockpit is large and entirely unobstructed aft. Swivel seats are provided for fishing and a fish well is worked in under the after deck. Below, there is a stateroom forward, with two spring berths. Next aft is a toilet room with a large locker opposite. The port side of the cabin is given up to the galley arrangements with a "Dinette" to starboard. The seats of this may be converted into a double berth.

A 32-Foot Cutter for Ocean Racing and Cruising

THIS interesting cutter is now under construction at the yard of Hodgdon Brothers, Boothbay, Maine. She is being built for Albert B. Fay, of Lake Charles, Louisiana. The design is from the board of Sparkman & Stephens, naval architects of New York. The boat will probably be used during the coming summer for cruising and racing in the waters around New York after which she will be taken south. It is likely that Houston, Texas, will eventually be her home port and that she will be used mainly in southern waters.

The new cutter is 44′ 0″ long over all, 32′ 0″ on the water line, 10′ 6″ beam and 6′ 6″ draft. She will have a teak deck and lead ballast. Fastenings will be of Everdur and the rigging of stainless steel. Her rig is taken from that of *Edlu*, winner of the 1934 Bermuda Race. On her the combination of large staysail and No. 1 jib topsail proved to be extremely efficient and the rig is one which will stand well without runners.



The new boat's rig is like that of "Edlu"

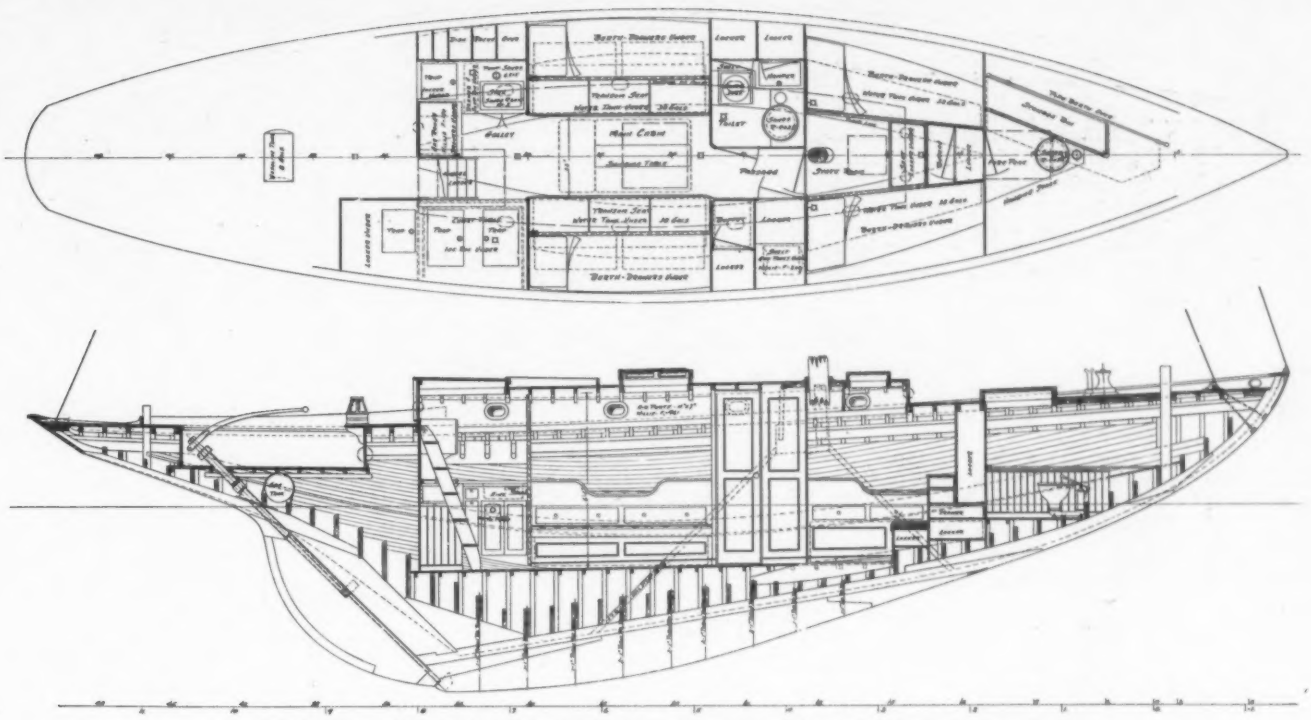
These are provided only for use in racing and in hard weather.

The total area of working canvas is 934 square feet, the mainsail being 560 square feet in area and the fore triangle 374. The area of the staysail is 201 square feet. Trysail and storm jib are provided as well as a good assortment of light sails.

The arrangement of the quarters below deck is conventional, which means that it will work out well in practice, with the galley aft. The forecastle is rather small, but a paid hand will not be carried except occasionally. Next is a double stateroom, abaft which is the main cabin with berth and seat each side and toilet room adjoining. The galley is aft, with the top of the ice box used as a chart table. The water tanks are worked in under the berths in the stateroom and the seats in the main cabin.

The designer says of her: "I believe that a successful ocean racer must be a

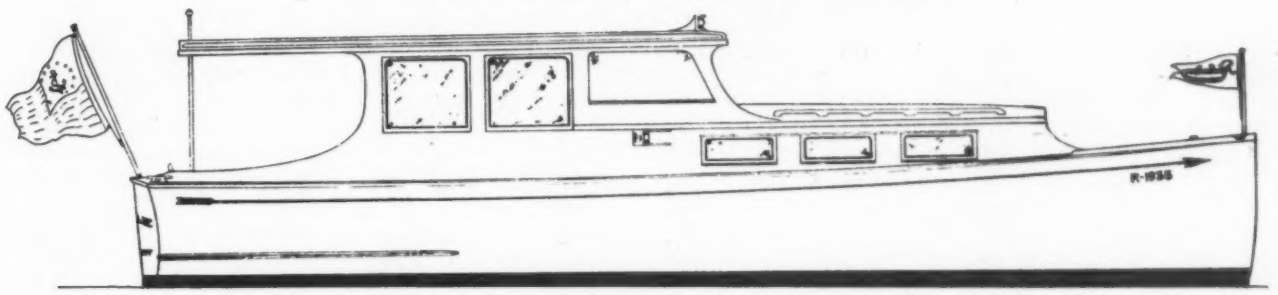
The plans reproduced in this section are the property of the designers under whose names they appear. For further information concerning any design address the naval architect in question.



Cabin plan and inboard profile of Mr. Fay's new cutter. Notice the diagonal strapping

good all around boat rather than a world beater under some particular condition, so that there really is nothing extreme about the design. I have tried to develop a type that will sail considerably better than the average in light weather and still have a rig that is small enough to be carried in a hard breeze and handled easily under all conditions. Further than this, a high maximum speed is important and windward ability should not be slighted, as even a little of this in a race will give a great advantage to the boat that can go well to windward. Also, from the cruising standpoint a boat that can do well to windward is much more fun to sail than one that cannot."

The 32-Foot Richardson Cruisabout

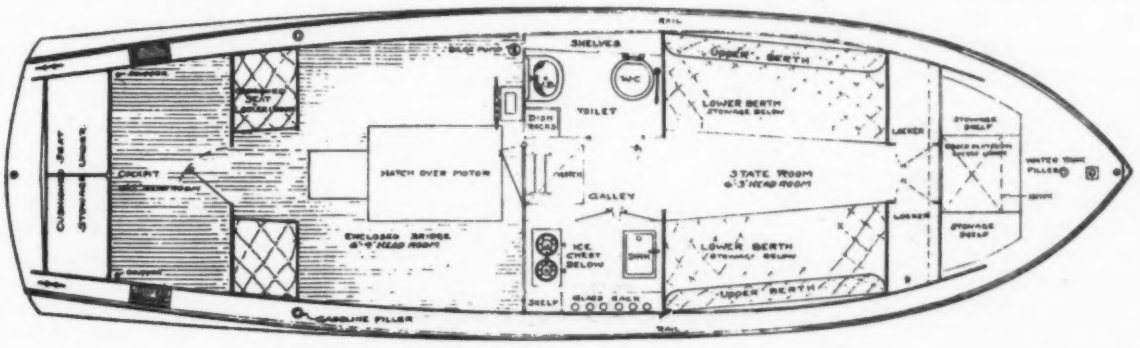


Outboard profile of the 1935 Richardson Cruisabout. This year the deckhouse is entirely enclosed

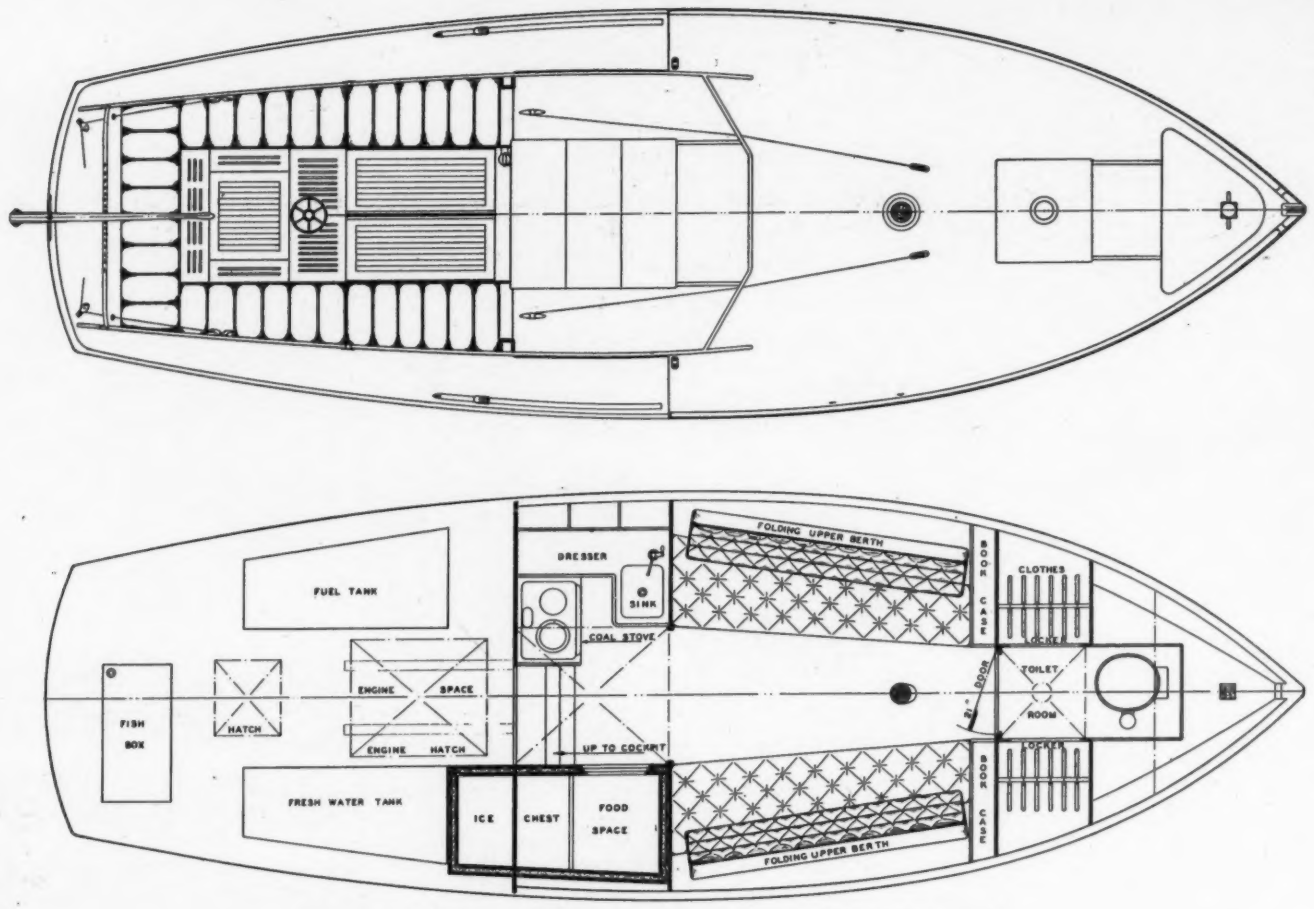
THIS boat, one of the 1935 standardized motor boats built by the Richardson Boat Company, Inc., of North Tonawanda, N. Y., is 32′ long, 9′ 6″ beam and 2′ 6″ draft. Her lines are attractive and she behaves well in a seaway. The deckhouse is roomy, with two seats aft which may be extended to form berths, and there is an open cockpit abaft the house.

Below, there is stowage space forward, with shelves and lockers, abaft which is the main cabin. This has lower berths and folding uppers each side, with stowage space under the lowers. Next is the galley, with two-burner stove, sink, ice box and dresser, while on the opposite side is a toilet room.

The regular power plant is a Gray Model 260 which gives a good turn of speed. Gasoline tanks are under the cockpit and the water tank is in the forepeak. Construction is the usual Richardson standard, with mahogany houses.



This Cruisabout sleeps six, four in the cabin and two in the deckhouse



Deck and cabin plans of the Munro Sailer, a boat that will be built in numbers

The Munro Sailer, a Smaller "Harbinger"

NAVAL architects are inclined to specialize, each one being particularly interested in some type which seems to bring out his best designing ability. Gordon Munro, of Fairhaven, Mass., has done much with the motor sailer and has been such a stanch advocate of the type for so many years that it is natural to expect much from him when he turns out a new model. The accompanying plans are his answer to many requests for a boat that will be a smaller and less expensive sister to his well-known *Harbinger*, built in 1930. As with his larger craft, seaworthiness, safety and comfort have been kept in mind, with handiness and speed also considered.

The new boat, which will be built in numbers to get the savings made by quantity production, is designed to furnish comfortable cruising accommodations for four. Her principal dimensions are: length over all, 27′ 6″; length on water line, 25′ 8″; beam, extreme, 9′ 0″; draft, 3′ 3″. Construction is high grade and the hull is heavily built of selected material. Keel, frames and deck beams are of white oak and the outside planking is of Philippine mahogany, double, and fastened with Everdur screws. The yacht's displacement is nearly 12,000 pounds and there are two tons of ballast on the keel.

The total sail area is 388 square feet, 277 in the mainsail and 111 in the jib.

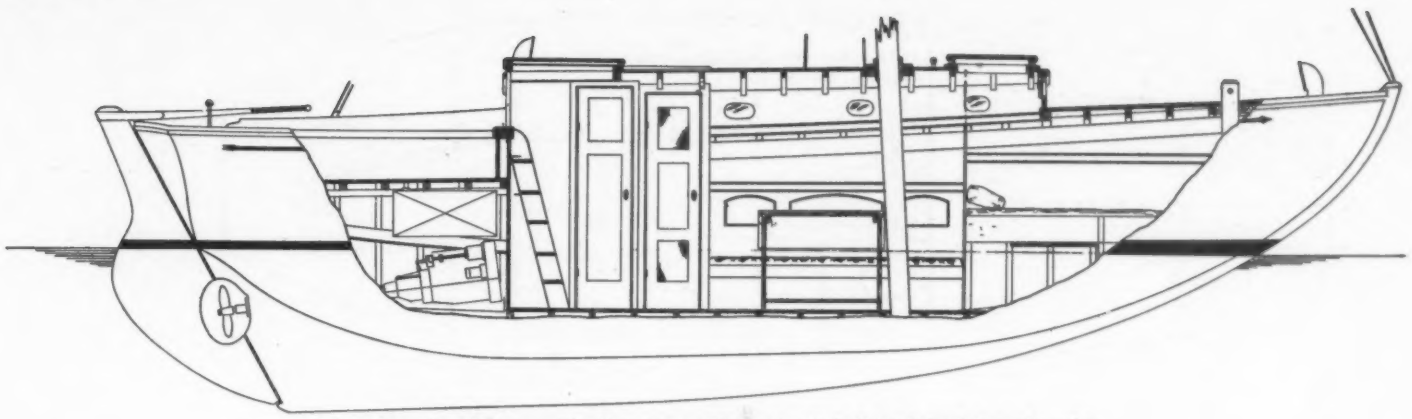
The sail plan is snug, with the canvas all inboard

Sheets and halliards are led to the cockpit so that she may be used as a single-hander.

The cockpit is large and self-bailing, with a floor more than seven feet long and three feet wide, half of the length being under the deck shelter. Hatches to the engine space and the lazarette have high coamings, and a teak grating is fitted, making a flush floor.

The arrangement below is well thought out, with the toilet room in the extreme forward part with hanging lockers each side and a hatch overhead. Next aft is the main cabin, with a transom berth on each side, over which is a folding upper berth. These uppers are so arranged that they may be unshipped and set up in the cockpit if desired. Forward of the berths are bookcases, with space below for charts, folding table, etc. The galley is aft, the full width of the boat and with six feet headroom. Coal stove, sink and dresser are to port while opposite is a huge ice box, the top of which may be used as dresser or chart table.

Engine and tanks are under the cockpit, with ample room for any of the popular modern motors developing from 20 to 35 hp.



Inboard profile of the new Mathis cutters. The engine is bulkheaded off from the cabin

A Standardized Auxiliary Cutter

NOW under construction at the yard of the Mathis Yacht Building Company, in Camden, N. J., are four of these auxiliary cutters. They are from designs by John Trumpy, vice president and naval architect of the firm, and they are planned to be able and seaworthy cruisers with accommodations for four persons. The principal dimensions of the boats are as follows: length over all, 30′ 6″; length on the water line, 25′ 6″; beam, over planking, 9′ 6″; draft, 4′ 0″.

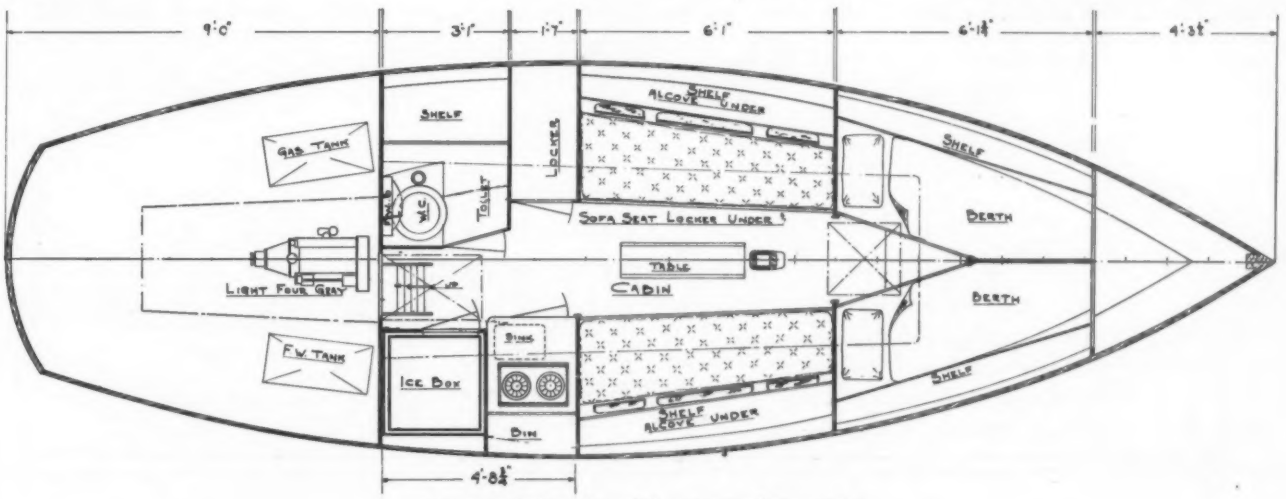
Construction is rugged as a look at the scantlings will show. The keel, for example, is of white oak, sided 15″ and molded 6½″. Stem, sternpost and deadwood are all of white oak, sided 5″, and through fastened with Norway iron bolts. Frames are of selected white oak, 1¾″ by 1¾″, spaced 12″ center to center. Deck beams and floor timbers are 1¾″ by 2¾″. Planking is white cedar, 1⅛″ finished thickness. There is 3500 pounds of cast iron on the keel, fastened with 1″ diameter Norway iron bolts, galvanized. Deck, cockpit floor and cabin top are canvas-covered and the cabin trunk is of Philippine mahogany. The interior of the boat is finished in white with mahogany trim.

The mast is hollow, of rectangular section, and the boom is solid. The sail area is 425 square feet, 305 in the mainsail and 120 in the jib. Spar fittings are all of bronze and the standing rigging is of Hazard galvanized wire rope set up with bronze turnbuckles. Running rigging is of Fitler manila and blocks are by Merriman, of lignumvitæ and roller bushed. Ratsey sails of Egyptian cotton are provided, as are sail covers.

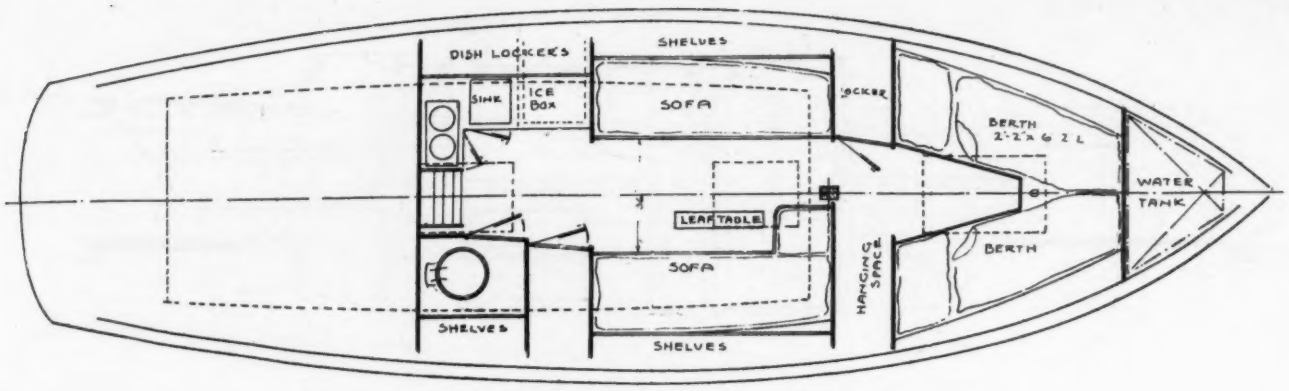
The sail plan shows a moderate rig

The sides of the cabin trunk are straight, with ample room outboard, and the cockpit is of liberal size. Below deck, the arrangement plan shows a double stateroom forward, with the cabin trunk extending over the floor, abaft which is the main cabin with a transom berth each side. Shelves and alcoves are above the seats and a good-sized hanging locker aft. The galley is aft, to starboard, and the toilet room is on the port side. There is ample headroom under the cabin trunk for its entire length and good deck room alongside it.

The power plant is a 4-cylinder special 2:1 reduction gear Gray engine equipped with electric starter and generator, and battery for starting and for cabin lights. A solid two-blade Hyde propeller is fitted. In smooth water the designed speed is 7½ to 8 m.p.h. Gasoline and fresh water tanks are in the wings under the deck. The engine is entirely under the cockpit and is on the center line and controls and instrument panel are in the cockpit.



Accommodation plan of the new auxiliary cutter



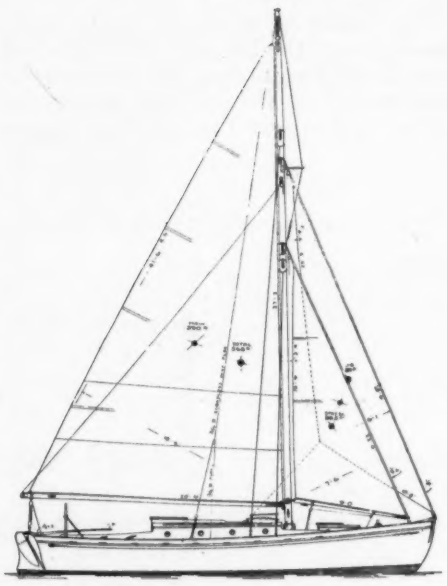
Accommodation plan of the auxiliary being built by Burger Boat Company

A New Auxiliary Cruising Cutter

THE cutter whose plans are shown on this page is now under construction by the Burger Boat Company, of Manitowoc, Wis., as a stock boat. She is 33′ in length over all, 29′ 6″ length on the water line, 9′ 10″ extreme beam and 4′ 9″ draft of water. She is from designs by William Atkin, of Norwalk, Conn.

She is rigged as a Marconi cutter with a moderate amount of canvas, her total sail area being 568 square feet. Of this, jib and staysail are of 89 square feet area each, while the mainsail is 590 square feet. The mast is built up of Sitka spruce, hollow and rectangular in section. The standing rigging is of Korodless wire rope. A winch is fitted on the mast for the main halliards. The jumper stay is double, with spreaders at right angles, so that it keeps well clear of the jibstay.

The sides of the cabin trunk extend forward and aft. Aft, they make the cockpit coamings and forward they enclose part of the deck around the mast, forming an open stowage space.



She is rigged as a Marconi cutter

The cockpit is roomy, with seat lockers on each side. A 32-gallon gasoline tank is installed outboard on each side under these seats. The water tank is forward, close up under the deck.

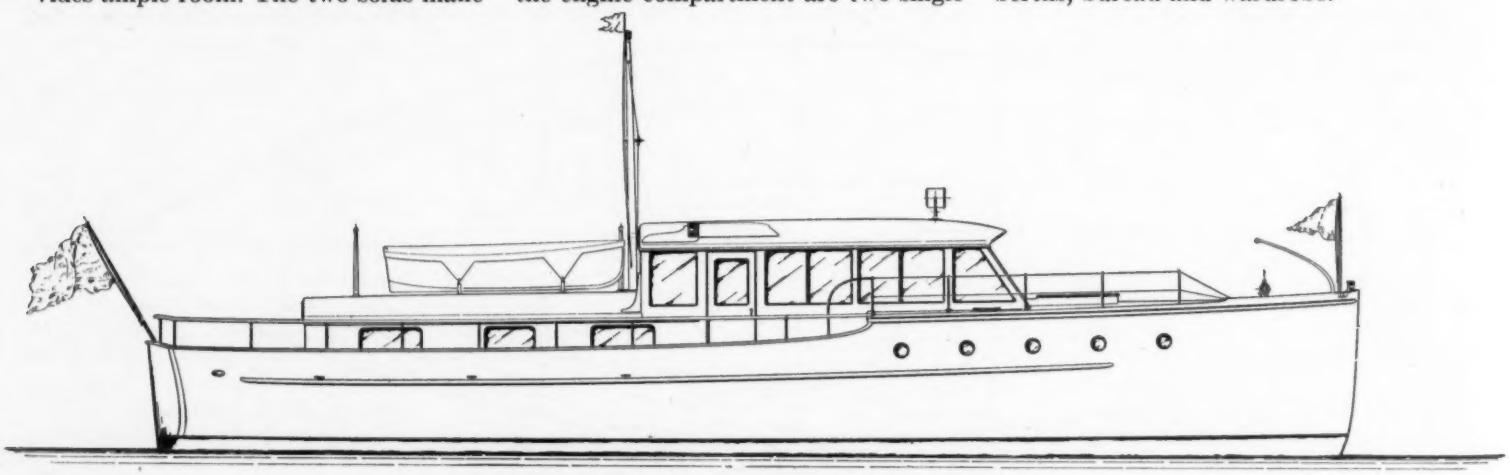
Below, the new boat has a double stateroom forward of the mast, with two standing berths, wardrobe and large hanging space. A booby hatch overhead gives a separate entrance to the stateroom and provides ventilation and additional headroom. The main cabin is amidships. Air ports in the sides of the house and a skylight assure plenty of light and air. There is a transom berth on each side, a drop leaf table, and a hanging locker. The galley is aft and there is a small toilet room on the starboard side.

The engine is installed under the cockpit floor.

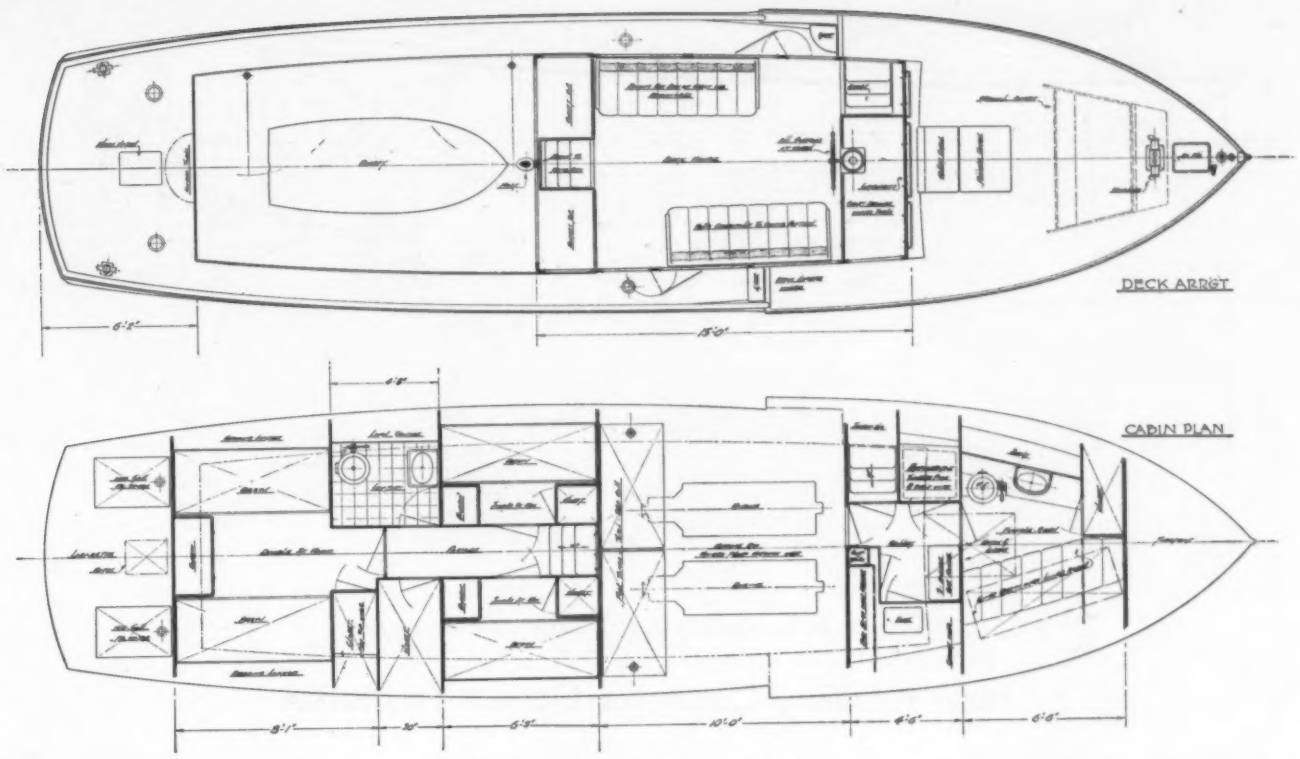
A Handsome and Comfortable Motor Boat

THIS latest motor boat, designed and built by the Elco Works, is an attractive craft. She is 48′ 5″ over all, 12′ 4″ beam and 3′ 0″ draft. The deckhouse, with its sashless windows, is light and airy and its 15 feet of length provides ample room. The two sofas make up into comfortable berths at night, while the starboard one may be moved over when the dining table is set up, allowing room outboard of it for service.

Below, the crew of two are berthed forward, with the galley next aft. Abaft the engine compartment are two single staterooms, one each side, and a lavatory on the port side. Opposite this is a spare room which may be fitted up as a locker, luggage room, shower bath, dressing room or bar. Aft is a double stateroom for the owner, with wide berths, bureau and wardrobe.



Outboard profile of the Elco 48, a modern motor yacht



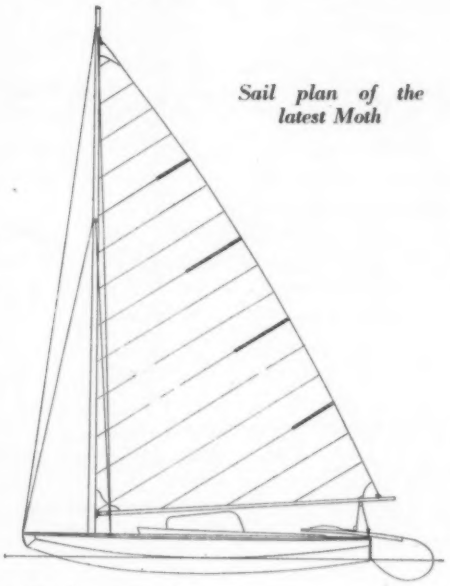
Deck and cabin plans of the new Elco 48-footer

The power plant is a pair of Elco F-62 engines which drive the boat at better than 18 m.p.h. All controls are brought to the helmsman's position.

While not provided on the stock boat, a forward cockpit may be built, even after completion, without disturbing the arrangements below deck. It is indicated on the deck plan.

A Moth Designed for Interclub Racing

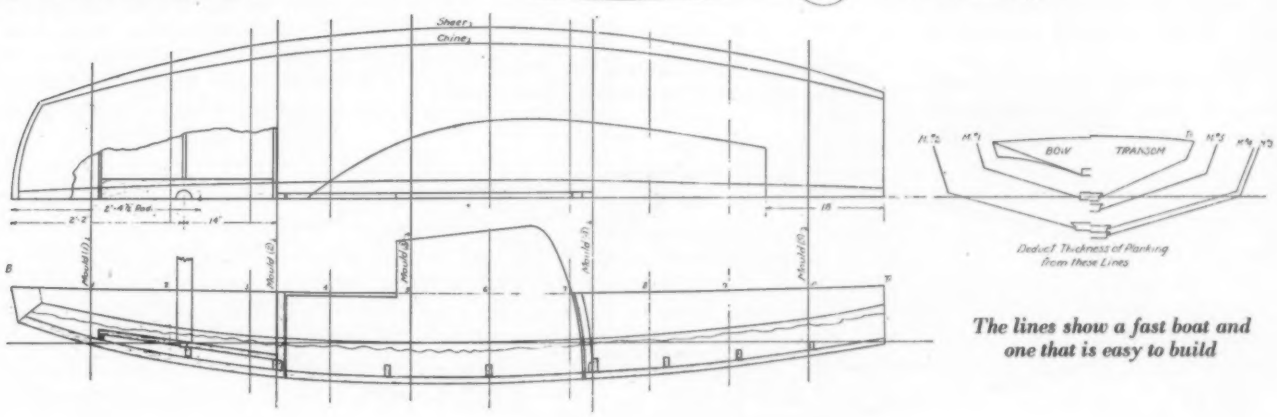
THE plans of the peppy little racer shown herewith were drawn by Lester H. Leonard, of the Leonard Boat Works of Daytona Beach, Florida. They have been approved by the Florida East Coast Yachting Association as the one-design class for State of Florida and Intercity racing and have been adopted by several clubs. The well-known racers *Miss Maxine* and *Dixie Starlight* were built to these plans and between them they held every championship title sanctioned by the National Moth Boat Association last year. At Atlantic City last fall, *Miss Maxine*, sailed by A. J. Michael, captured the Antonia Trophy, with Joel Van Sant's *Dixie Starlight* a close second. The latter boat also took the Steel Pier Trophy, emblematic of the individual championship in the Middle Atlantic section of the class.



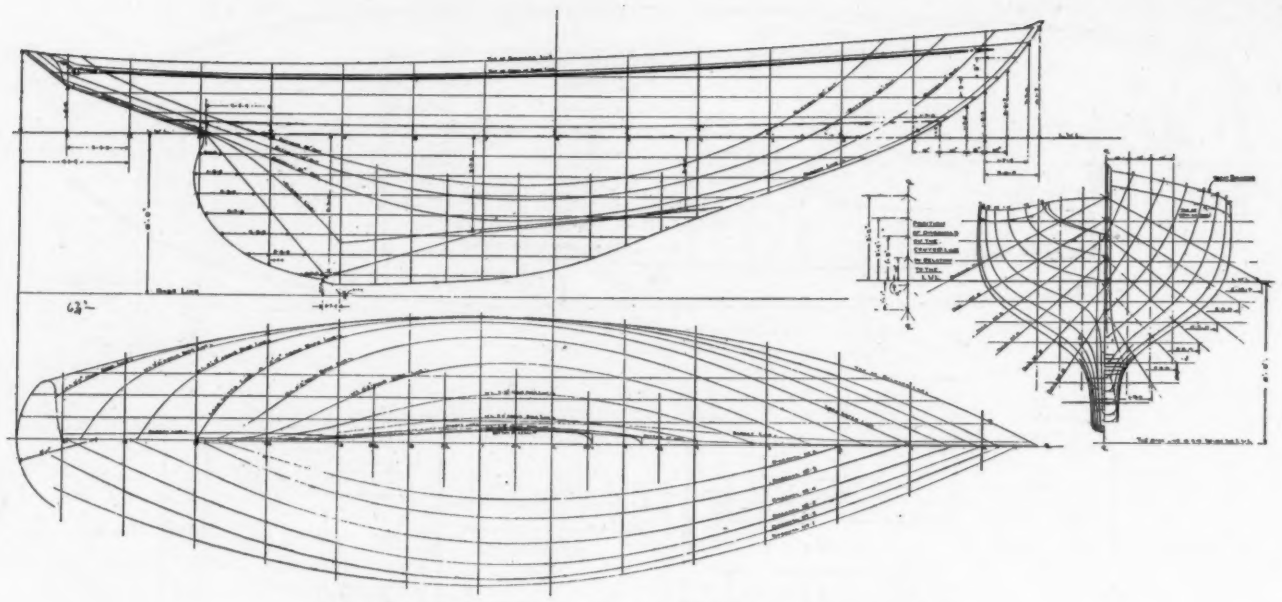
Sail plan of the latest Moth

The boats comply with the simple restrictions of the class and have done much to bring up the speed of the competing craft. They are built of Port Orford cedar and their hulls weigh 154 pounds. So far, this type of hull seems to be the fastest that has been developed in the Moth Class. The fore and aft lines are particularly easy and the construction is quite simple so that the boats are not expensive to build. A number of amateurs have turned out creditable jobs.

The class has been growing in popularity in this country and interest in these boats is now being displayed in England. It is in the cards that before long there may be international competition in the Moth Class. Team racing has flourished heretofore and a foreign invasion would stimulate it considerably.



The lines show a fast boat and one that is easy to build



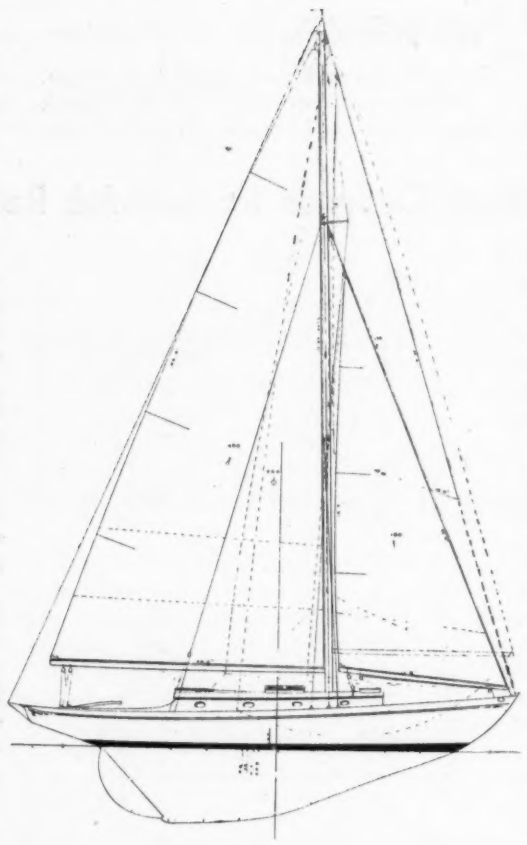
The lines of the new cutter for J. B. Edwards reveal an easy form

New Auxiliary Cutter for Detroit Yachtsman

ON THIS page are the plans of a new auxiliary cutter now being built for J. B. Edwards, a member of the Detroit Boat Club. She was ordered, through the firm's Detroit office, from Henry J. Gielow, Inc., of New York, and her plans were developed by Francis Sweisguth, who is associated with that organization. The new yacht is under construction at the yard of the Burbach Yacht Company of Grand Rapids, Mich. She was designed to fit the cruiser racing rule of the New York Yacht Club, the new rule of the Cruising Club of America, and the rules of the Lake Michigan Yachting Association and of the Detroit River Yachting Association.

Her principal dimensions are as follows: length over all, 38′ 2″; length on load water line, 26′ 8″; extreme beam, 9′ 6″; draft of water, 5′ 7″. The lines are sweet, with fair deadrise and an easy turn to the bilge. Keel and framing are of oak, the frames all being steamed and bent, with heavy frames where necessary. The deck is of fir, while trunk cabin sides and ends, bulwarks, rail and deck joinerwork are of mahogany. Plenty of knees are provided. There is 6000 pounds of iron outside.

The rig is modern, lofty and with a short base line, and a permanent backstay is fitted. The area of the mainsail is 480 square feet and of the jib 180. The jib topsail brings the total area up to 790 square feet.

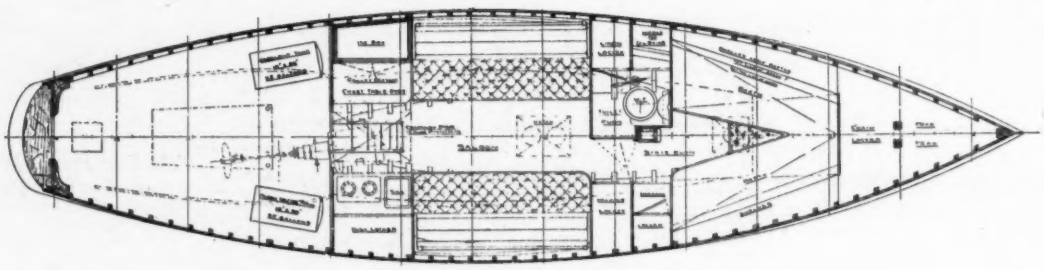


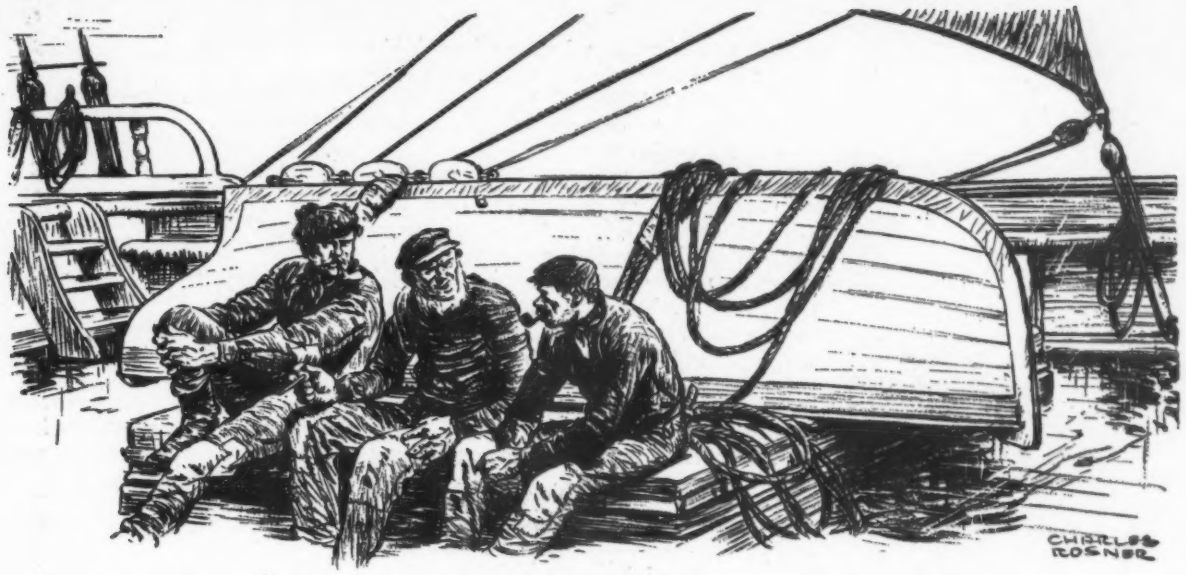
Sail plan and profile are modern. (Below) There are sleeping quarters for six in the new auxiliary

The accommodations below provide for chain locker and storage space in the fore peak, which is reached through the forward stateroom, there being no hatch in the forward deck. The stateroom has a berth each side and a seat between them. The house extends forward over the floor of this room and there is a hatch overhead. Next aft is a toilet room, with linen locker, on the port side, and dresser and lockers opposite. The main cabin is amidships, with extension transom berth on each side and two folding pipe berths. The galley is aft, with stove, sink and dish lockers on one side, dresser and ice box on the other. The chart table is over the dresser.

The engine, a Kermath Sea Bird with reduction gear, is installed under the companion ladder with the propeller on the port side. Outboard are the tanks, of 25 gallons capacity each, for gasoline and water.

The Burbach Yacht Company is also building a sister boat for stock. She has her engine, a Gray Light Four, on the center line. Also under construction are a 23½′ and a 26′ knockabout, an 18-footer like the boats of the Sandusky Sailing Club, and a 10′ Class D dinghy, all from Mr. Sweisguth's designs.





Under the Lee of the Longboat

By "SPUN YARN"

ONE day last winter when news was scarce I saw an item about a radio man who broadcast his impressions as he was hurtling down a dangerous mountainside on a bobsled. He had time to say something like, "Hello, folksies, this is guh-guh-great." Then he reached the bottom and got his name in the paper. It made me think that radio people have failed to exploit our favorite sport as they should. If it was worth while (I don't say it was, mind you) to strap a short-wave transmitter to a bobsledder's back and place a microphone before his face, why didn't some enterprising company do the same to Sherman Hoyt in the famous fourth race of the *Rainbow-Endeavour* feud? Then we wouldn't have been in any doubt as to whether it was Sherman or someone else who shouted, "For Somebody's sake, luff her, Mike!"

In the 1928 race to Spain there wasn't any radio reception that amounted to anything, and in the early days on the *Pinta* when the wind was west and it was quiet on board we used to solace ourselves with canned music. Our favorite record was a song about the girl of my dreams. Every afternoon at tea time as the brandy bottle rotated around the cockpit and the kitten played with the phonograph needle we heard a sentimental tenor sing about his dream girl, and even after the lapse of seven years the recollection chokes me all up. But when the wind came out ahead, and we shortened down reef by reef and sail by sail, and slogged miserably into it, we used to think of that tenor with his candied-potato voice and the golden girl of his dreams, both so dry and comfortable ashore, and we cussed hell out of them. I hope any radio crooners in the audience will bear this in mind if they feel inclined to go sentimental and mishy-mushy on the air while the boys are racing to Norway.

Commander Steve Yeandle, U.S.C.G., who is a friend of yachtsmen, told me once that if I wanted to see him any time on Coast Guard business I could park my flivver in front of his office in the space reserved for government vehicles, and that if the space was full he didn't mind if I shoved an official car or two out into the traffic to make room for mine. He didn't say what luck I'd have with the city police, and I've been waiting until I felt like a ball of fire before trying it on. In the meantime I'll transact my business in print. From June 12th to about the 20th the yachts racing to Norway will be in danger of colliding with floating ice. It would be slick if the Coast Guard cutter on ice patrol duty during this period would supplement its regular code bulletins with spoken radio warnings of the location of bergs and the areas to be avoided. With this aid the Norway racers could save time and distance without rushing into needless danger. Will you please see what you can do about this, Commander?

I observe in a British yachting contemporary that the Admiralty has purchased the 30-ton ketch *Tai-Mo-Shan* for the use and instruction of young naval officers, and that she may be entered in the Fastnet Race. The ketch, it will be remembered, was built in China and was sailed home to Portsmouth, England, by five British naval officers who secured special leave of absence for the purpose. Too bad our own future naval officers at Annapolis have no chance to get acquainted with the sea in small, able sailing craft like the *Tai-Mo-Shan*. But it seems that the naval bureaucrats at Washington consider it a waste of time and money to teach our military sailors how to sail. Maybe they're right and perhaps they're wrong. Their judgment wasn't too hot when they wasted lives and money on the *Shenandoah*, the *Akron*, and the *Macon*.

It certainly is hard work keeping out of trouble at the helm of this longboat. Just as I think I'm sailing a particularly safe course my steering gear jams, I make a wide yaw (or is it yawp?) and somebody cuts me down. I thought I was absolutely in the clear last month when I mentioned the Lee Rail Vikings, a yacht club I made up out of my own head to avoid unpleasantness. But the issue was hardly off the press before the editor, the publisher, and the owner of this magazine received telegrams from members of the Lee Rail Vikings saying that I had insulted them. After I'd read them all I felt like a Congressman who receives a flock of letters from his constituents which are identical in subject and which vary only in degrees of illiteracy. But I apologized all around and feel now that I'm in no immediate danger of sinking with great loss of life.

Frank H. Anderson of New Haven designed and built this 18-footer. She uses a Lightwin outboard for auxiliary power and seems to be fast and able

Propellers Yesterday and Today

THIRTY-FOUR years ago propellers were efficient, but today a propeller must also be a precision job. The metal of which it is made must have high tensile strength and elasticity, be non-corrosive and must resist electrolysis.

In 1901 the average gasoline engine ran from 300 to 400 r.p.m., 600 revolutions being considered high. These speeds did not require high tensile metal or a well balanced wheel. Indeed, few of the engines were balanced and vibration was to be expected. But engines have been improved yearly and revolutions have increased so that today we talk of rotative speeds up to 12,000 r.p.m. Just what the ultimate speed will be, or at what point a propeller will begin to fall off in efficiency we do not know, though we do know that 12,000 r.p.m. is not the upper limit for a properly designed wheel.

These high speeds require accuracy in manufacture, with all blades exactly alike in pitch, cross section, weight, spacing and balance. In fact, every part of the machinery, from flywheel to propeller lock nut, must be perfect. There is no sense in installing a perfect propeller on a bent or improperly supported shaft, and an unbalanced reverse gear would be detrimental, to say nothing of the necessity for most accurate running balance in the engine itself.

To manufacture today's propellers requires an organization of trained engineers and artisans. The staff of the Columbian Bronze Corporation has had thorough training in propeller making and designing, covering boats from outboards to large vessels and engines up to 5000 hp., with rotative speeds varying from 50 to 1000 r.p.m.

+ + +

Of Interest to the Skipper

Herreshoff Bristol Bottom Paint

This bottom composition, developed by Edward Smith & Co. in conjunction with the Herreshoff Manufacturing Co., has been proving popular with yachtsmen. Among them may be mentioned Commodore Paul H. Smart of the Noroton Yacht Club. Because of the increase in the club's racing fleet last season, the ways were often congested with boats being hauled out between races. Towards mid-season, the commodore, who had used Smith's paints for some time, coated the bottoms of his three boats with the new Herreshoff Bristol bottom paint. During the season his boats were hauled occasionally but were shoved overboard untouched. When laid up at the end of September, their bottoms were in good condition, the finish being fairly hard and there being no fouling.

Among the prominent boats painted last season with this finish were: *Branta*, Ten-Metre; *Windward* and *Istalena*, Class M; *Hi-Esmaro*, 267′ Diesel yacht; the Ten-Metres *Thoroughbred* and *Revenge; Kittiwake*, 76′ motor yacht; *Ramallah*, 85′ schooner; *Carolina*, 50′ sloop, and a number of other craft.

For spars, Smith makes Spar Buff, Spar Tan and Spar White, any of which are effective and handsome.

A New 18-Footer

Frank H. Anderson, of New Haven, Conn., has designed and built a neat little boat that handles well in both light and reefing breezes, is fast and able, and has plenty of room for six people. She is 18′ 4″ over all, 6′ 6″ beam, 9½″ draft of hull and draws 3′ 3″ with centerboard down. The board is of 5/16″ galvanized steel and there is 250 pounds of ballast inside. The mast is hollow, of rectangular section and is 26′ above the deck. The sail area is 200 square feet.

The photograph was taken in a good breeze when the boat was traveling fast. It takes quite a breeze to put her deck under, he reports, and the deck is wide enough to keep the coaming clear.

+ + +

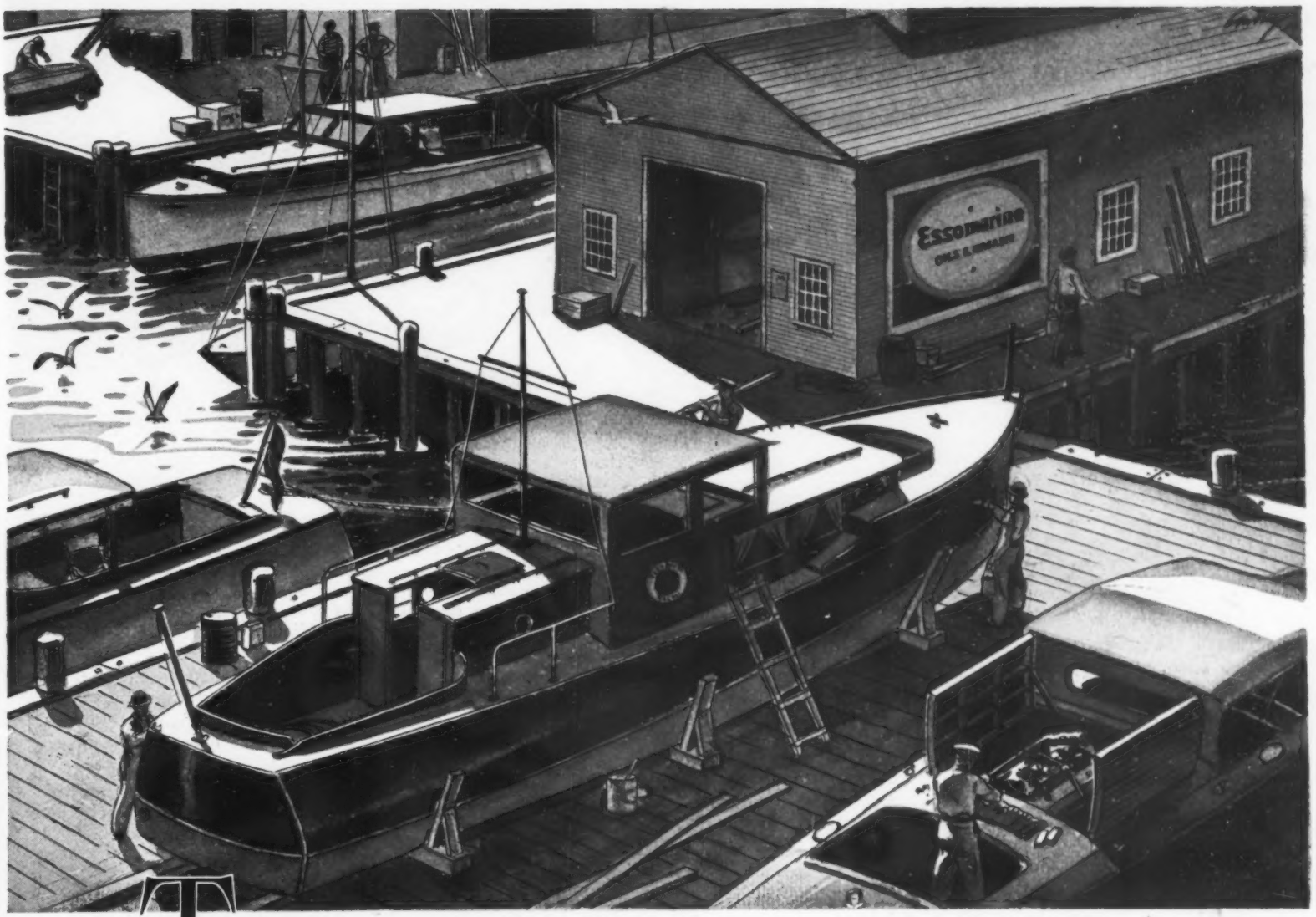
New Low Prices and New Models

The Universal Motor Company, of Oshkosh, Wis., announces a considerable reduction in the price of the Blue Jacket Twin, a two-cylinder engine suitable for boats up to 20′ in length or for auxiliaries up to 26′ long. The improved Blue Jacket Twin, with built-in reverse gear, is nearly 5″ shorter than the older model, being but 27¼″ over all. The "Bobtail" model, which is built without reverse gear, is even shorter. Generator and starter are set snugly alongside the crankcase and the engine is only 19⅞″ wide. While the engine is compact, all parts are readily accessible.

The reverse gear has been improved so that now it is extremely quiet in operation and allows throttling the engine down to low speeds for trolling or maneuvering.

For those looking for extreme light weight, the engine may be had with aluminum oil base, reverse gear housing and cover, flywheel housing and cover, etc. This saves 35 pounds on the Blue Jacket Twin. On larger engines, the saving in weight is naturally more, being 172 pounds on the Cruiser

"Wanderer II," Stanley Holder's 35-footer, hails from Whangaroa, New Zealand. Driven by a ten-year-old Scripps F-4, she has traveled 8,000 miles in the last 18 months without a hitch. Note the 400-pound black marlin



Tip to a Yachtsman who wants *Top* Performance

ABOUT now . . when you're fitting out and getting squared away for a big season . . the rasp of sandpaper and the slap of the paint-brush are music to your ears! Many are the carefree vacation cruises that you're planning. And *right now* is the time to make sure that no engine trouble will mar those happy jaunts. Take a tip from yachtsmen everywhere who know their lubricants. They invariably call for Essomarine . . *specialized . . dependable . . safe!*

Essomarine Lubricants are built for rough, tough use in marine engines *exclusively*. They're made to take the terrific punishment of long, hard forward thrust against head winds . . of incessant rolling and pitching . . of severe work in reverse. Ask the ace speedboat drivers about Essomarine . . *they* know! Last season their Essomarine-lubricated engines swept to brilliant victories at the regattas . . set new speed and endurance records. They standardize on Essomarine because they want the high film strength . . great staying power . . complete protection . . that Essomarine *guarantees*.

You'll find Essomarine Lubricants conveniently available at the red, white and blue Essomarine sign on docks and floats everywhere. Look for that sign . . it's the standard of the world-leader in specialized lubrication . . a pledge of quality that is unexcelled in the marine field today.

Try Essomarine *now* . . prove the facts in your own engine!

Essomarine Lubricants are distributed by the following major oil companies: STANDARD OIL COMPANY OF NEW JERSEY—COLONIAL BEACON OIL COMPANY, INC.—STANDARD OIL COMPANY OF PENNSYLVANIA STANDARD OIL COMPANY OF LOUISIANA—STANDARD OIL COMPANY (Inc. in Kentucky)—STANDARD OIL COMPANY (OHIO)—HUMBLE OIL & REFINING COMPANY—(In Canada) IMPERIAL OIL, Limited.

Essomarine Oils are available in 1-gallon and 5-gallon containers and in drums and half-drums. Essomarine Greases are available in 1-lb. and 5-lb. packages and 100-lb. drums. The U. G. Lubricant is also available in 1-lb. tubes and 25-lb. pails.

ESSOMARINE ENGINE OIL—high viscosity index insures instant lubrication when cold, and maintenance of body under continuous high temperature. Available in 5 grades: Nos. 60 (SAE 30), 80 (SAE 50), 100 (SAE 50), 120 (SAE 60), 140 (SAE 70).

ESSOMARINE GEAROL 200—For independent oiling of reverse and reduction gears and oil-type universal joints. It adheres to gear teeth under all conditions, insuring perfect lubrication, cushioning and protecting against wear, and reducing noise.

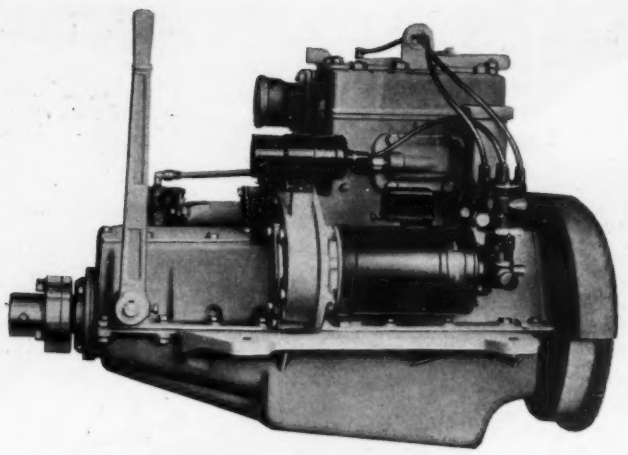
ESSOMARINE U. G. LUBRICANT—developed especially for outboard underwater gears, open reduction and reverse gears, grease-type universal joints and ball bearings of propeller shaft or drive shaft. Unaffected by water. Contains no solid matter—no acids to pit or corrode bearings.

ESSOMARINE WATERPROOF CUP GREASE—For stuffing boxes, stern bearings, and all grease cup applications. An ideal packing for the water pump. Water, fresh or salt—hot or cold—has no effect on it.

ESSOMARINE BREAK-IN OIL—Refined and blended for high film strength and oiliness to protect the engine during the critical early part of its life. Recommended for use during the first 50 hours' operation in a new or rebuilt engine.

Essomarine
OILS AND GREASES

PENOLA INC., 26 BROADWAY, NEW YORK CITY



Starboard side of the Universal Blue Jacket Twin, Model AFT-L, with electric starter, generator and built-in reverse gear. Its length is only 27½ inches

Left. This Matthews "Sailer," owned by Dr. E. L. Sonnenschein of Chicago, carries a Gray 10–12 hp. "Sea Scout" engine. Here we see her taking a little rough weather on Lake Michigan

Eight. The cost of this aluminum equipment is, we are told, surprisingly low.

Another improvement in the Universal line concerns the Utility Four, the length of which has been reduced by 3½". It delivers 20 hp. at 2000 r.p.m. It also has a new and improved reverse gear, entirely enclosed in a leak-proof housing. Another feature is the self-adjusting spring thrust take-up on the camshaft which cares for any end play and promotes quietness. The oil pressure adjustment unit is built-in. The sump pump is also built-in and located so that the oil may be removed without tearing up the floor boards. The motor bed ledge is designed so that it will allow the installation of remote control of the reverse gear. The breather pipe cover from the vacuum-cleaned crankcase will not allow smoke or fumes to escape into the boats. Opposite rotation and built-in reduction gear models are available.

The company also announces that it is advised by the Richardson Boat Company, Inc., that Universal motors may be installed in Richardson boats at a slight increase in cost over the regular power plant.

\+ + +

Technical Advice Available

Fitting out time is here for boat owners in the North and the covers are being removed and the work of preparing for the summer is under way. While most owners who do their own work have a good idea as to scraping, painting, etc., there may be problems connected with the power plant that are a bit puzzling. The selection of the correct grade of oil for any particular make and model of engine is most important to assure a trouble free season.

The services of the technical and engineering staff of the Marine Division of the Texas Company are at the disposal of yachtsmen who have fitting out problems to solve. Questions regarding lubrication, fuel, etc., will be answered by mail while in most large cities resident engineers can give personal advice to owners with engine troubles.

Another Texaco service concerns the intra-coastal waterways. A new bulletin, dealing with depth of water and other conditions on the inside route between New York and Miami, has just been issued. This has been prepared with the coöperation of the U. S. Army Engineers and the New Jersey Board of Commerce and Navigation. Copies may be obtained by writing to the Texaco Waterways Service.

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The New Gray Sixes

The Gray Marine Motor Company presents two new heavy duty engines, the Six-95 and the Six-105, with double ignition, seven main bearings, Thermoset, and extremely compact dimensions. These engines attracted considerable attention at the recent Motor Boat Show.

Rated 91 and 105 hp. respectively, at 2400 r.p.m., the smaller engine is 3⅛" by 4½" and 318 cubic inches displacement, while the larger one is 4¼" by 4½" and 383 cubic inches. Both are but 55⅝" long over all and 20⅜" high above the center line of the shaft.

The cylinder blocks are of nickel chrome iron alloy. The engines are salt water jobs throughout and are designed for economical operation in the larger stock cruisers and work boats. They have the Thermoset, the positive temperature control; base cleanout plate; front end pulley for driving a bilge pump or extra generator; relay starting switch; two-piece removable clutch housing; accessible oil filler tube; self adjusting oil seals, etc.

Both engines are available in both right and left hand rotations and a straight line 2.3:1 reduction gear may be fitted.

\+ + +

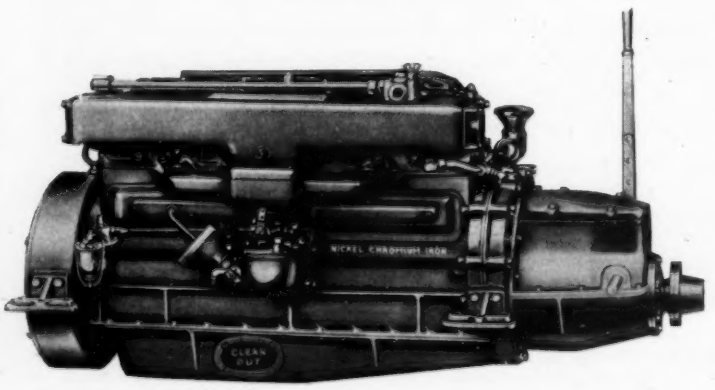
Hacker Makes Important Announcement

John L. Hacker, N.A., has recently made an announcement that will prove of interest to the boating public and to friends for whom he has designed and built boats.

As of January 1st, he resigned his position as President of the Hacker Boat Company, which he founded, and relinquished all connection with that firm to organize a new company, and to institute a new program in the production of fine boats and yachts.

Offices have been opened at 3123 East Jefferson Avenue, Detroit, Mich., and a new firm, The John L. Hacker Company, has modern and extensive manufacturing facilities in Bay City, Michigan, shops in Detroit, and manufacturing affiliations in Canada.

The new company is building class racing boats, tenders, runabouts and cruisers, all custom built from Mr. Hacker's designs and under his personal supervision.



The Gray Six-95 and Six-105 are compact, heavy duty engines designed for salt water service

HERE'S an outboard that refuses to quarrel with any other motor in the world . . . because it occupies a class all its own!

Thousands are buying it—not merely because of its amazingly low price . . . but because the low price buys *everything* most people want in a light utility motor.

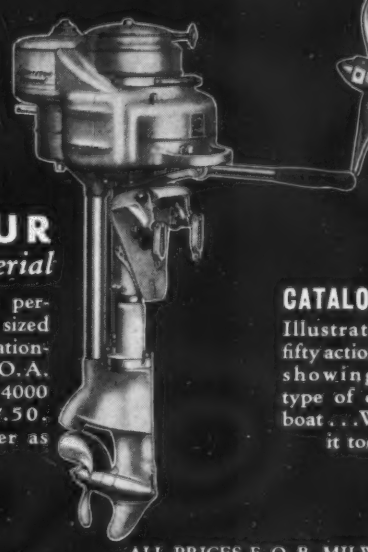
The Sportsman is the world's lightest outboard; hence the handiest, most portable. Its light weight is achieved without sacrifice of ruggedness or dependability, or of such basically desirable features as *really quiet* underwater silencing, vibrationless steering, and hooded, protected engine construction.

The Sportsman's power covers the speed ability of the majority of small craft — rowboats and resort craft, skiffs, canoes and yacht tenders. It develops 1.5 N. O. A. certified brake H. P. at 3500 R. P. M.

The Sportsman is fully described in the Evinrude-Elto catalog, a handsomely illustrated booklet that covers the widest, most complete line of modern outboards. Five Hooded Power models; three models built specifically for fishing service. Write for your catalog today; with it we will send the name of a nearby dealer where you can inspect the Sportsman. OUTBOARD MOTORS CORPORATION, 4204 North 27th Street, Milwaukee, Wisconsin.

FISHERMAN

Popular "Fisherman" now available in Standard, Reversing, and Weedless models. Develops 4 N.O.A. certified brake H.P. at 3250 R.P.M. An exceptionally powerful, rugged motor at low cost. Standard Fisherman, $95.00.



LIGHTFOUR *Imperial*

Velvety four-cylinder performance in a popular sized motor. Entirely vibrationless. Develops 9.2 N.O.A. certified brake H.P. at 4000 R. P. M. Price, $167.50. With Simplex Starter as shown, $182.50.

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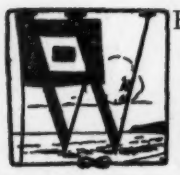
ALL PRICES F. O. B. MILWAUKEE

26th year **EVINRUDE-Elto**

A Couple of Rigging Gadgets

By

S. W. HATHAWAY



RITING of the 14-foot International Dinghy, Uffa Fox lays stress on the importance of playing the main sheet in strong winds. He attributes much of the success of his *Avenger* to this practice. With this I am in full agreement, as in racing it is far better to keep full way on the boat than to suffer a spectacular knockdown with its attendant loss of way.

The small boat man soon learns what surprising strength a hundred square feet of canvas exerts through a six- or nine-thread rope. He also finds that holding the sheet in his hand for long is tiring and that adequate and speedy control of it is sometimes difficult. A friend, who races a small cat, approached me with the beginnings of a design which finally developed into the following gadget. What to call it perplexed us for a while but we finally dubbed it the "winch."

The winch is simplicity itself. The sectional illustration shows all the essential details. The groove in the base is a circle of uniform depth, half the diameter of the balls, thus providing a raceway for the two ball bearings. There are two grooves in the bottom of the barrel, as shown, each a quarter circle. These grooves are slightly less than half the diameter of the balls in depth at one end, decreasing to zero depth at the other. The center post is adjusted so that the barrel just rests on the balls when they are in the deep end of the grooves. It is then found that the barrel rotates easily in one direction, but when the direction is reversed the balls jam, at the same time forcing the barrel tight against the flange of the post. Thus the winch can rotate in one direction only.

The winch is worked as follows. A turn of the main sheet is taken around the barrel so that when it is hauled in the barrel rotates freely. There is practically no added friction with the winch such as is found with the sheet led under a cleat. To hold what is gained, it is necessary only to keep the hauling part taut, as the friction of the turn around the winch takes most of the strain. The sheet is started by slacking off on the hauling part, when it slips around the barrel with ease, but it can be checked instantly with one hand. It acts exactly as a snubbing post when starting the sheet and, due to the revolving barrel, little more effort is required to trim than if the sheet were hauled direct from the blocks.

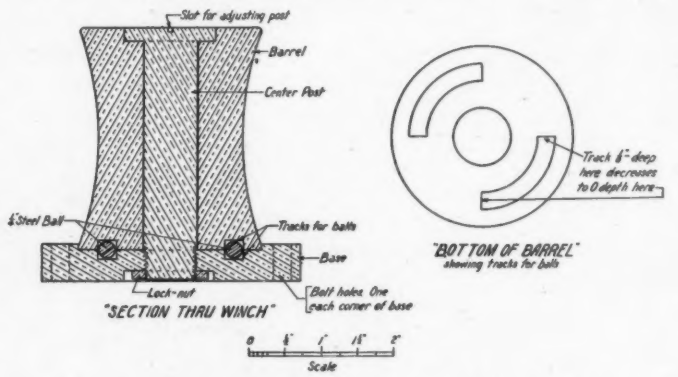
The original winch is all bronze, except the balls, which are ordinary steel bearing balls. It is bolted to the top of the centerboard trunk, at the after end, where it is handy both to helmsman and crew.

This gadget is a joy to use. One has the feeling of perfect control at all times. The ease and certainty with which the sheet can be trimmed or started, besides the absence of any appreciable physical strain in holding it, is a great help, especially in racing when so many things require attention.

The old boom had become badly warped and it was decided to make a new one. We wanted to increase the efficiency of the sail, especially in very light winds, by giving a hollow to the foot. At the same time we recognized the need of a tightly laced foot in strong winds. The illustration shows how the boom was rigged to meet these conditions.

First, all the slides on the foot of the sail, except the one seized through the clew cringle, were cut off. The cringle slide is needed to hold the clew. In place of the other slides, a small round thimble was seized on across the bolt rope and a similar thimble inserted through the eye of the other slides.

The boom itself was prepared as follows. At the outer end a groove was filed, with a brass strap around the end, forming a fairleader for the outhaul. At the inner end, on the starboard side, a small cheek block was fitted. Under the middle of the boom two small cleats were fixed. A jackstay, about two feet longer than the boom, was made of 1/8" flexible wire rope by splicing a small single block into the inboard end, and an eye, just large enough to slip over the end of the boom, in the outboard end. The outhaul is a

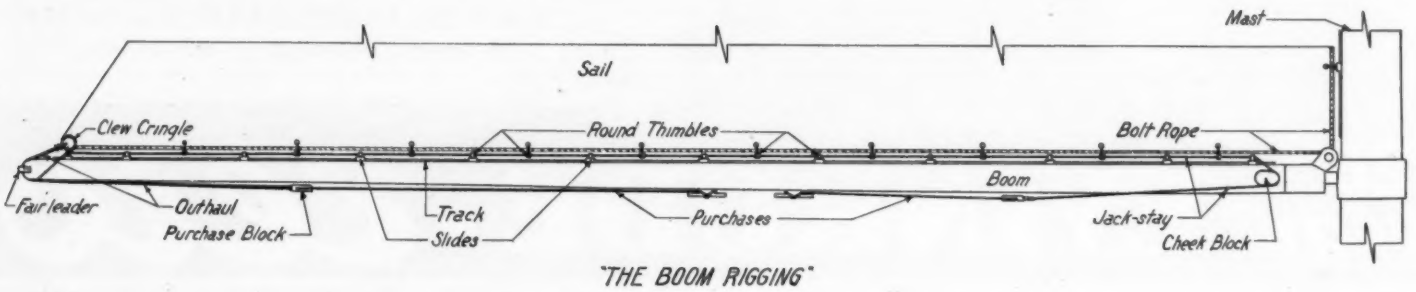


length of six-thread manila with one end free and a small single block on the other. Through these blocks on the outhaul and jackstay single purchases are rove, the standing parts being fast to screw eyes in the boom.

The sail is bent thus. The tack is seized down to the gooseneck as usual. Then the wire jackstay is rove through the thimbles of the slides and those of the bolt rope alternately, and the eye is slipped over the end of the boom. The outhaul is rove up through the fairlead and made fast to the clew cringle with a topsail sheet bend. After the first rigging, the sail is easily unbent by casting off the outhaul, when sail, jackstay, and slides can be slipped off the track as a unit.

When rigged as above, the clew can be hauled out to its black band by the outhaul purchase. For a tight foot, the jackstay purchase is hove down as taut as possible. The sail then sets as perfectly as though the sliders were seized directly to the grommets. If it is desired to give the foot of the sail a hollow, it is only necessary to slack off the two purchases simultaneously, the amount of hollow being governed by the drift of the jackstay.

Whether there is a gain in efficiency with this rigging, I am as yet unable to determine. While the winch has proved its value, this boom rigging is described here with the hope that other small boat owners will experiment with it.



"THE BOOM RIGGING"

STARS *of the* EVENING

THAT *always* SHINE

MARTIN'S V.V.O. — Brought to America by McKesson only a few months ago, this great Scotch is scoring an instant—and nation-wide—success. One of the most famous Metropolitan clubs in the world reports it leads by 70%! No wonder: rich pot-still whiskies to start with, plus 10 years' aging, give such a soft, smooth richness as many Americans never knew. Yet Martin's costs no more than many immature whiskies!

DRAMBUIE — This is, literally, the Liqueur of Kings—distilled originally for Bonnie Prince Charlie in 1745, and still made by the same Scottish family, by the same secret recipe. Compounded on a base of rare Scots whisky, Drambuie is magically pungent as Highland honey, and more smoothly potent than you would dream. Rich yet never cloying, as appealing to men as to women, it has become Britain's favorite Liqueur.

DENIS-MOUNIÉ — The members of the great French house of Denis-Mounié have been engaged for generations in Cognac-making. Their brandies are treasured all over the world — by the best judges in France and England, and from Canada to China. Now the United States, too, is discovering how different Denis-Mounié Cognacs are: always conscientiously aged, always bland, mellow, superb. See for yourself!

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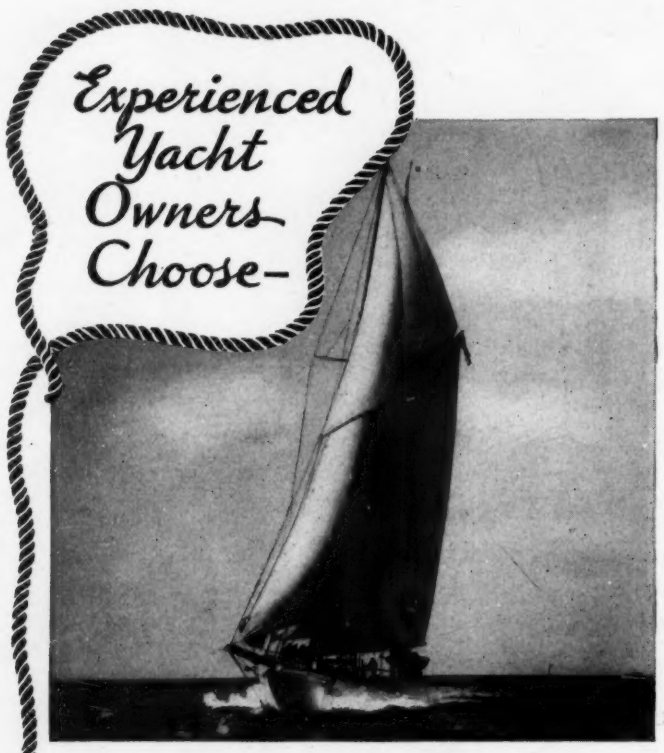

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News from Yachting Centers

Sound Waves

By LEE SCUPPERS

The Time has come, the skipper said,
To write your yachting news;
Of ships and clubs and sailing dinks
And salty guys who cruise.

WHEREUPON Lee belayed the main brace on which he was doing such a neat splicing job and turned to with a will on the log book. It seems that spring is here again. The signs are incontrovertible. There is Lewis Carroll poesy at the head of this column, Larchmont has set its race week dates, yachtsmen are heading for Bermuda, the dinghy association is bursting out in a rash of meetings, ice boats are being dismantled, winter covers are coming off somnolent occupants of shipyards.

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The return of Commodore Harry Maxwell from a southern cruise was the signal for Hugh (*Idler*) Kilmer, chairman of the Larchmont Yacht Club regatta committee, to announce his plans for the impending season. Formal activities will start on June 15th with the annual spring regatta, but long before that Larchmont will be the scene of numerous dinghy races and special contests for the restless Interclubs, which begin racing before anyone else is overboard and quit after less ambitious classes have hauled out for the winter.

Race week will run from July 13th through July 20th and will include the usual junior day on July 17th. Wouldn't be at all surprised if a lot more records went by the board during this blue ribbon event of the Sound racing season. The depression, Huey Long and Father Coughlin to the contrary, seems to be slipping and there ought to be more boats than ever out this summer.

The juniors will be happy to know that Mr. Kilmer is planning a new course for them with fixed marks. The youngsters are a little fed up on sailing to Delancey Point and then trying to find a dory somewhere out in the Sound before returning to the venerable, rubber-sided *Satanstoe.*

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The North American Dinghy Association has been unusually active. What with harbors being ice-bound, there was little else to do but hold meetings and if there is anything a dinghy owner likes better than racing it is holding meetings. The Class B boys got together a couple of weeks ago at the Princeton Club in New York and when they got through there was nothing left of the class rules but the title. They threw the thing wide open, retaining only the 11½-foot over all maximum measurement and the theoretical sail area limit of 72 square feet.

All restrictions were taken off beam, weight, flotation and rig, so now Class B is truly a development or experimental group. The way is open for all manner of freak hulls, gear and rigs. Class B boats may have stays, struts, spreaders, curved masts, wishbone booms, trick rudders and centerboards and what-have-you?

No longer will smooth-skin hulls be barred. By the time the eliminations are held to select a team of two American dinks to meet the September invasion of the British and perhaps the Canadians and Norwegians, you'll be seeing some rare sights at dinkus regattas. The trials, by the by, were postponed until July or August to give builders of new boats an opportunity to get them at concert pitch for the eliminations.

After the "B" boys got through, owners of Alden Class A boats organized the one-design class that was denied them a year ago. So the present N.A.D.A. set-up has Classes A, B and D and one-

CUMMINS gives you Diesel power at its best

• Yacht THEANO. Owner: E. Paul DuPont, Montchanin, Delaware. Equipped in 1929 with two 6-cylinder CUMMINS Diesel Marine Engines. In June, 1934, Mr. DuPont wrote: "My CUMMINS Diesels run so smoothly, reliably and are so easy to care for that I could not want anything better."

ENJOY the incomparable satisfaction of Diesel power in the most advanced form—with a modern, efficient CUMMINS Diesel Marine Engine. *Any* Diesel engine offers advantages over gasoline power—in fuel economy and safety—but CUMMINS engineering developments have advanced *far beyond* the limitations of conventional Diesel design.

CUMMINS Diesel Marine Engines embody important *exclusive* features, including the ingenious CUMMINS method of measuring, distributing, gasifying and injecting the fuel, resulting in efficiency and dependability of operation much superior to any other engine.

Instant starting—maximum power efficiency—minimum fuel consumption—remarkably quiet, smooth performance at all times—simplicity of operation—enduring dependability—low maintenance expense—these are reasons why more and more boat owners are choosing the CUMMINS Diesel as the outstanding engine in its field.

Before you equip a new boat or replace an old engine, see the latest CUMMINS Diesels. Sizes from 55 to 200 h.p.—for yachts, cruisers and auxiliaries. Also compact Diesel Generating Sets for marine service, from 20 KW to 100 KW. Sales and service by experienced, responsible dealers in many cities. Write today for complete information.

CUMMINS ENGINE COMPANY

The Leader in Diesel Engineering Advancement

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LOW-PRESSURE FUEL CONTROL

• Ordinary Diesel engines deliver the fuel at high pressure—2,000 to 5,000 pounds or much higher—causing maintenance difficulties. The CUMMINS Diesel employs low pressure—only 75 to 130 pounds.

VALVELESS FUEL PUMP

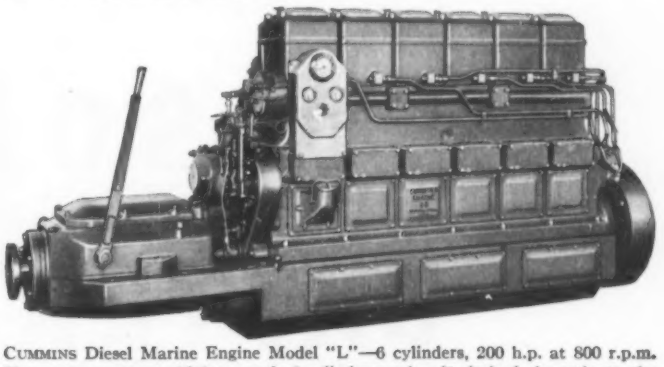
• Ordinary Diesel engines employ multiple pumps and valves, making uniformity in fuel charges virtually impossible. In the CUMMINS Diesel, a single plunger and distributing unit, self-adjusting to engine speed and load, assures accurate, uniform fuel charges. No fuel waste. No detonation. Smooth engine performance at all times!

PRE-HEATED FUEL CHARGE

• Ordinary Diesel engines inject the fuel in the form of a cold, wet spray. In the CUMMINS Diesel, the fuel charge is preheated and gasified before injection—for fast, clean burning.

INSTANT STARTING

• Ordinary Diesel engines are sluggish in starting. The CUMMINS Diesel starts instantly, because of the pre-heating method which begins with the first revolutions of the engine.



CUMMINS Diesel Marine Engine Model "L"—6 cylinders, 200 h.p. at 800 r.p.m. If a more compact, higher speed, 6-cylinder engine is desired, investigate the CUMMINS "HMR"—100 h.p. at 1500 r.p.m. (Net weight, 2500 lbs.)

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BATTERY

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Northern dinghy sailors took the honors in the Biscayne Bay "Sunburn" racing. William Dodge's "Mothball" won in Class A, "Dick" Hill's "Mae West" cleaned up in Class B and H. M. Baker's "Squid" swept Class D

design groups in each. Owners of the old Ratsey, Dyer and Ollendorf "A's" are said to be contemplating the formation of another clique to be known as the "Superannuated Frostbite Dinghy Association" in which membership will be barred to all serious-minded persons.

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By the time you read this, the Sound Interclubs will be in Bermuda for their annual series with the Royal Bermuda Yacht Club one-design knockabouts and the Stars will likewise be in Hamilton for the first of a series of contemplated annual international spring championship regattas. The Interclub team, all dressed up in the new rig, will include *Barbara*, sailed by Billy Luders; *Scram*, skippered by Eddie Maxwell; *Nancy*, Don Millar, and *Ariel*, under command of Arthur Knapp.

The Prince of Wales Trophy races for Six-Metres will be held late in April. The three Anker-design Bermuda "Sixes" will be out with new rigs to greet their American rivals. J. Seward Johnson has *Swallow* in Bermuda already and Chandler Hovey, manager of the *Yankee* America's Cup defense syndicate, has chartered *Jill* for the occasion. It is just possible that Paul Shields will take *Challenge* down to the Onion Patch and that Briggs Cunningham will join him with *Lucie*.

And so, now for a watch below.

Puget Sound News

OFFICERS elected for 1935 by the Seattle Yacht Club are as follows: commodore, C. W. Stimson; vice commodore, Russell Gibson; rear commodore, Ellis Provine; secretary, Anderson S. Joy; and for the junior members: commodore, Garrett Horder, vice commodore, John Dore, Jr.; secretary, Robert Lamson.

The Puget Sound Star Fleet will be headed this year by Roy W. Corbett, fleet captain, while the correspondence of the organization will be handled by Philip Spaulding, national secretary, and Barbara Nettleton, fleet secretary. The Star Class at Seattle has a fleet of eleven boats, of which eight were actively racing last season and probably all will be out this year. The Blanchard Boat Company has built three "cruising Stars." They are from Star plans but the lines have been drawn out to give a round bilge boat and a house has been added. They carry the regulation Star keel and skeg, except that the keel weighs around 1150 pounds. They are surprisingly fast and are meeting a demand for a racing boat that can be used for short cruises. Some of the Star fleet cruise to Vancouver every year, and after the races spend a week coming home.

The Little Ship Club of the Pacific Northwest, composed of boats of members of the Seattle, Queen City, Tacoma and Olympia Yacht Clubs under 30-foot rating (R. O. R. C. Rule), is offering a trophy for the first boat to cruise around Vancouver Island (incidentally, quite a trip for a boat under 30 feet), and a trophy for the first boat to cruise one hundred miles offshore from the Cape, and back.

The Pacific International Yachting Association Regatta will be held at Bellingham, Washington, July 1st–4th this year; the Seattle Yacht Club is staging a three-day Invitational Regatta over Labor Day week end, and the Tacoma Yacht Club is holding a regatta August 17th and 18th, which is open to all clubs on the Sound.

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NAMES *of* UNKNOWN OWNERS *of* BOATS EQUIPPED *with* KORŌDLESS WIRE ROPE

We know that Hazard Korōdless Wire Rope is standard equipment on hundreds of boats:—well known class boats such as "Stars," "Atlantics," "Frostbites," "Victories," as well as larger racing boats and cruisers. Champion after champion is being equipped with Korōdless rigging. Fact is, the tide toward Korōdless has swept in so fast we haven't been able to keep a complete record of owners. Now we want the names of boats which we do not know are Korōdless equipped. We want to watch them, to see how much better service Korodless gives.

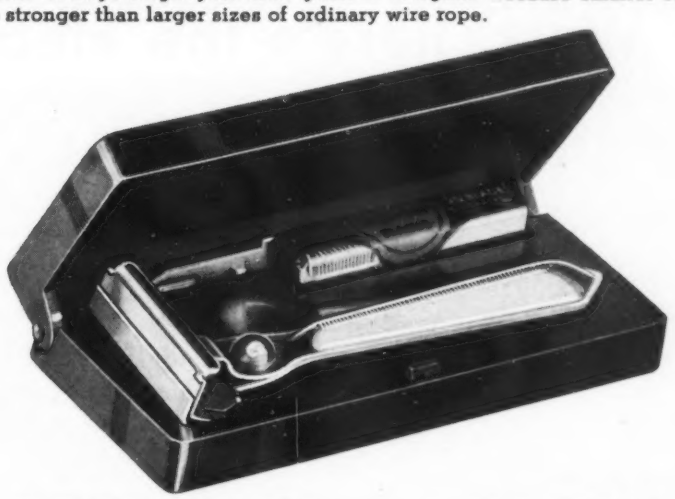
Use the coupon!

If your boat is equipped with Hazard Korodless and we have no record of it, please take a minute to fill out the coupon below and mail it to us in an envelope or pasted on the back of a penny post-card.

Accept gift FREE!

To repay you for this slight effort we will send you absolutely free, post prepaid, the handiest razor ever invented to tidy up sailorman or landlubber either. This is the new Schick Injector Razor which loads the blades into the shaving head automatically.

So, fill out the coupon now, today, if you are one of the unknown owners of a boat equipped with Hazard Korōdless Wire Rope — the stainless rigging that can't corrode, because it's immune to fresh or salt water attack. It stays bright year after year. It is lighter because smaller sizes are stronger than larger sizes of ordinary wire rope.



SCHICK Injector RAZOR

Here's a real safety razor at last. You can't spill the blades, you can't touch them, you can't get them in wrong. You change blades as easily as you adjust your binoculars. No matter what soap or cream or latherless preparation you use, no matter what kind of water you draw or whether it's hot or cold—with this new Schick Injector Razor all you need is a light touch and a couple of minutes and your face looks and feels ship-shape. There are 20 blades in each injector, and that means 20 instant changes.

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Winthrop L. Warner's "Nancy R"
Gerard B. Lambert's Class J, "Yankee"
T. O. M. Sopwith's Class J. "Endeavor"
Hiram T. Horton's Aux. Ketch, "Vileehi"
The New York Syndicate's Class J, "Rainbow"
Roderick Stephen's Yawl, "Dorade"
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Narragansett Bay Gossip

By SPINNAKER LIZ

BOATS of the fishing type seem to be as popular as schooners. Perhaps it is in the name "sport fisherman" that the lure lies. At the Frederick S. Nock Boat Yards, in East Greenwich, two 43-foot fishing cruisers, designed by Eldredge-McInnis, Inc., are building. Both boats are for Providence yachtsmen. They are 43′ 3″ over all, 42′ 1″ water line, 11′ 6″ beam, and 3′ 2″ draft, and will be equipped with pulpits, lookouts, swivel chairs, bait and fish wells. They will be powered with 180 horse power Sterling motors, besides 30 horse power engines for trolling purposes.

Also at this yard they are installing two Hall-Scott motors in the *Doubloon*, a motor boat owned by Paul Nicholson of Providence. As soon as she is equipped, her owner will take her to the Bahamas.

The 52-foot schooner designed by Chester A. Nedwidek and building at Nock's is almost completed and is to be launched soon after the first of April.

\+ + +

Norman Herreshoff, an architect by profession, is following in the traditional footsteps of his family and has designed an 11-foot sailing skiff, as he calls it, and a 14-foot dinghy. They are being built down on the Sound and probably will be on exhibition during the Bristol Regatta.

At the Anchorage, Inc., Bill Dyer has been busy filling orders for the 10-foot dinghies. Besides the twenty-five, one was sent to G. Albert Lyons of Asbury Park, Florida, early in March.

\+ + +

In view of the demand of last year, Herreshoff's, in Bristol, are about to build thirty Herreshoff 12½-footers. It is interesting to note that there are over 250 of these boats scattered from Honolulu to England. The first were designed and built in 1914.

Herreshoff's are also building from their own design a 13-foot dinghy with the same sail area as that of the frostbiters. A specially designed trailer is to go with it. The lead has been poured for the keel of the Strawbridge Twelve-Metre yacht and the frames have been bent ready for planking. A new catamaran, which has been very much simplified and improved upon over the *Amaryllis*, has been designed and a model is now being built. The two new Fishers Island 23-footers are finished and ready for delivery, as is the owner's launch for the power yacht *Viking*. The firm reports the sale of P. G. Woodward's schooner, the *Arcturus*, to Major Patton, of Honolulu. She left the first of March under power and jigger rig.

\+ + +

Sparkman & Stephens report the sale of Hobart Ford's *Mother Goose*, the motor sailer which was the mother ship of the Cruising Club, to Frederick G. Towle of Pawtucket; and John J. Raskob's Ten-Metre *Toodes* to Adaman Jencks of Providence.

On Buzzards Bay

Furnan's Yacht Agency has designed a 30-foot sloop for Mrs. Anna L. Johnson of Charlestown, West Virginia, to be used on the Chesapeake. She has 9 feet beam and 3 feet draft. A 25 horse power Universal motor will be installed.

Another 31-foot sloop, 25 feet on the water, 9½′ beam and 4′ 6″ draft, with a 25 hp. Kermath, has also been designed. Both of these boats are being built at Casey's yard.

Great interest has been shown in a new class to be called the "Clipper Class" a 17-foot sloop designed by Gordon Monro of Furnans. She is 13½′ on the water, 6′ beam and 2′ 6″ draft. These will be keel boats, mahogany-planked, marconi-rigged. All gadgets

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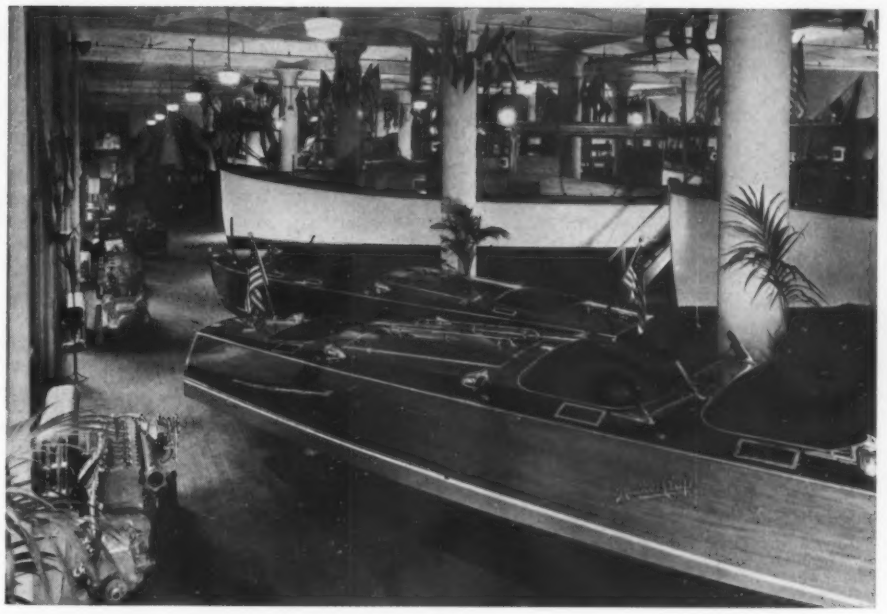

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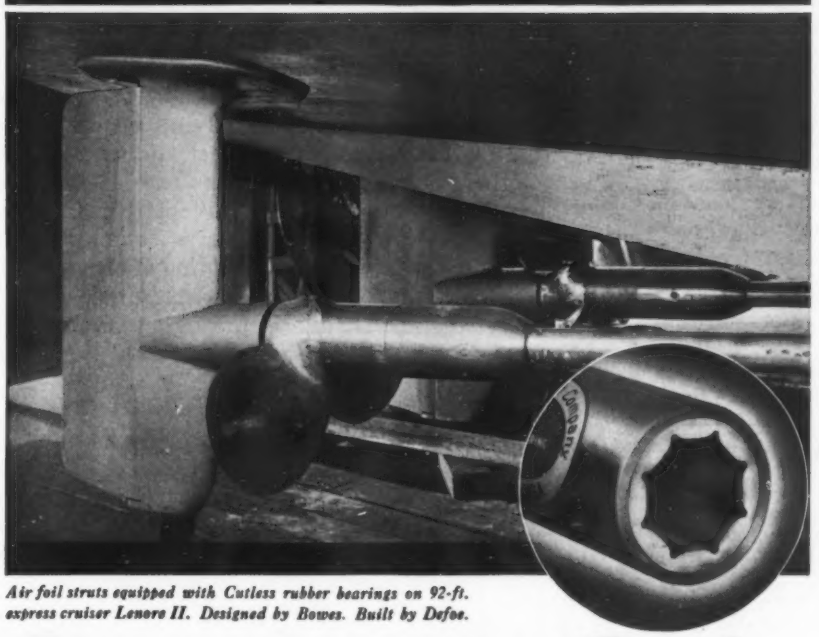

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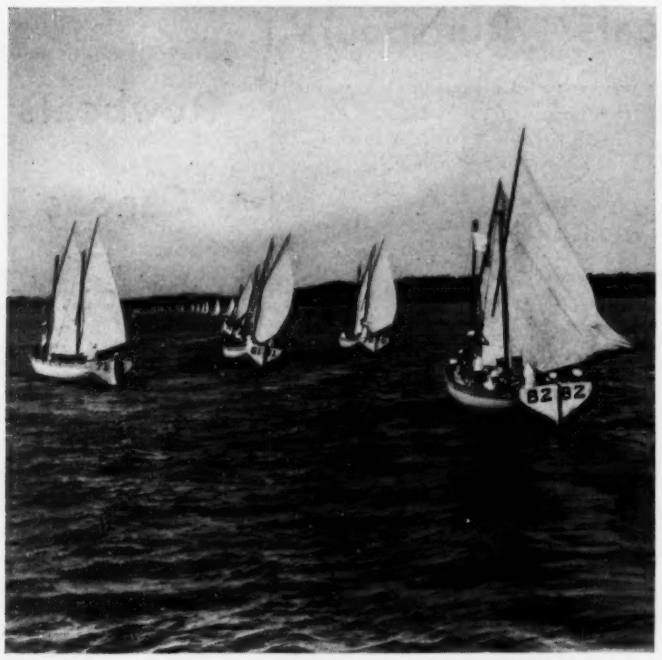

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are to be of stainless steel, and sails are to be of Wamsutta Egyptian. The Clippers will have all the room and comfort that most small boats lack and will be just right for day sailing. Three Narragansett Bay yachtsmen William Huntoon, Lyman Dunnell and Dick Bolster, have placed their orders. The boats are being built at Pat O'Connell's, in Taunton.

+ + +

Peirce and Kilburn, Inc., are getting orders daily for overhauling and fitting out. The yacht *Tabor Boy*, which belongs to Tabor Academy, is on the railway, preparatory to a cruise this summer. Fitting out has begun on the *Fantasy*, owned by B. W. Doyle of Leominster, and work on two Fishers Island boats is completed. Several power cruisers are overhauling engines with definite ideas about going in commission, and within a very short time the schooner *Onward III*, owned by Phillips N. Case, will get under way. James Gordon Gibbs' *Roustabout* is fitted out and ready for action.

+ + +

Casey's Yard is still running full to the brim. The Alden 50-foot auxiliary ketch for Mr. E. M. Farnsworth, Jr., of Brookline is almost completed and it is expected that she will be launched in April. The two new 30-foot sloops designed by Furnans are under construction. The *Myra Maude*, a 48-foot power boat which belongs to Bryon Leonard is having a sunken cockpit built in her.

West Coast Bubbles

By WALDO DRAKE

COMMODORE HAROLD DILLINGHAM, of the Trans-Pacific Yacht Club, made a special trip to California from Honolulu in March for the express purpose of awakening East Coast interest in the 1936 San Pedro-Honolulu ocean race. Commodore Dillingham, whose 58-foot staysail schooner *Manuiwa* (ex-*Highlander*) won the 1934 Transpacific race, called a special meeting of the T.-P. Y. C. at the Los Angeles Athletic Club on March 8th, at which he fired the membership with enthusiasm for the project. "The Honolulu race is three times as long as the Bermuda ocean race, but I think we can prove to any East Coast crews who come out that our event is infinitely more pleasant," said Dillingham. He expressed similar sentiments to a later assembly of San Francisco members of the Trans-Pacific at the St. Francis Yacht Club.

+ + +

New yacht havens continue to spring up along the Southern California coast, so that the balmy shores south of Point Conception will soon offer as many week-end way stations as Narragansett Bay. The latest South Coast addition is Ventura, twenty miles south of Santa Barbara, where the 450-foot shore end of a 3,000-foot breakwater, and two 250-foot groins, are being built as the initial phase of a comprehensive commercial and pleasure port development. Meanwhile, building of the great pleasure port at Balboa-Newport is making rapid progress, with four big suction dredges digging channels, turning and mooring basins, while 4,175 feet of breakwaters are nearing completion at the entrance.

+ + +

Major Max Fleischmann, of Santa Barbara, in his 218-foot Diesel cruiser *Haida*, is cruising this month along the Baja California coast and up the Gulf of California on another scientific expedition, this time to color-photograph and paint rare West Coast fish.

+ + +

Walton Hubbard, Jr.'s, South Coast yards commissioned E. E. (Ned) Manning's new 40-foot ketch *Kelem* in March, and in early April will launch a 40-foot bridge-deck cruiser for Harry Williams, of Los Angeles. She will be driven by a Chrysler Imperial marine motor, using a $2\frac{1}{2}:1$ reduction gear and is expected to develop a cruising speed of 15 knots.

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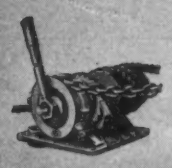
"Little Giant" Windlass, Fig. 5741



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Roller Reefing Boom Band, Fig. 644-A

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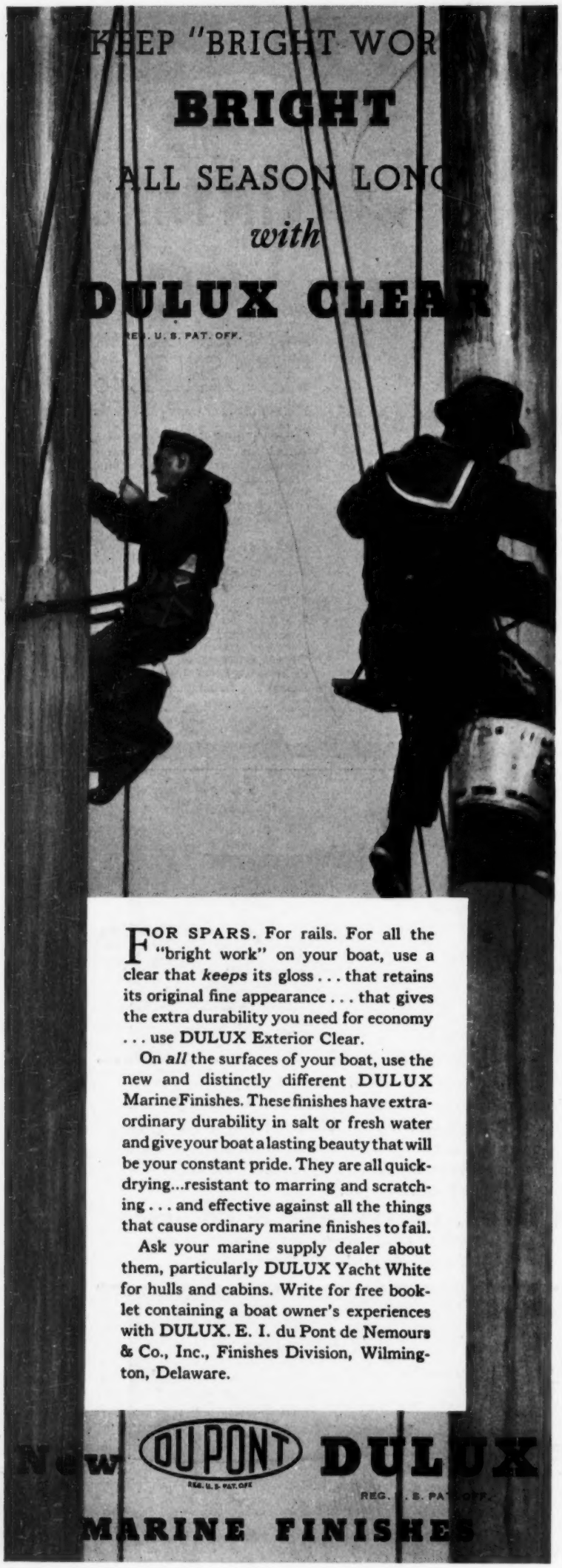
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The first International 22-Square-Metre sloop built on the West Coast is under construction at Wilmington from designs by Edson B. Schock for a Los Angeles yachtsman. She will have an over all length of 36 feet and water line of 24 feet. Comfortable cruising accommodations are planned.

\+ + +

Arthur Rousseau's Six-Metre sloop *Maybe*, perennial and undefeated defender of the San Francisco Perpetual Challenge Cup, has been sold "down the river," to David Baird, of Santa Monica. *Maybe's* departure leaves the defense of Golden Gate honors to Cyril Tobin's *Naiad*. Before this is printed *Naiad* may be on San Pedro Bay, flying the burgee of the Los Angeles Yacht Club.

\+ + +

Donald W. Douglas, of Santa Monica, owner of two California sailing champions, the 75-foot schooner *Endymion* and the "Six" *Gallant*, is new commodore of the Pacific Coast Yachting Association. He is also the new commodore of the Southern California Yachting Association. The vice commodore of P. C. Y. A. is William Hagar, San Francisco; rear commodore, George Vibert, Newport Harbor; and secretary, Vincent Jarvis, San Francisco.

Massachusetts Bay Flashes

By ED EARLE

THE Boston sloop *Yankee*, flying the colors of the Eastern Yacht Club, is expected to be sailing on the high seas, under her seagoing yawl rig, bound for Gosport, England, the fourth week of April. Designer Frank C. Paine rushed the work along on the veteran Class J sloop in view of the fact that the yachting season gets under way on May 15th in English waters. Commodore Gerard B. Lambert's three-masted schooner *Atlantic* has been at Lawley's Neponset yard, undergoing some final grooming touches before leaving as the *Yankee's* convoy.

The *Yankee's* new four-section metal mast has been slated to go across on a Cunarder, ready to be stepped on the Lambert sloop when she arrives at Gosport. The new "stovepipe" saves 500 pounds on the wooden mast which *Yankee* used last fall in the America's Cup trials. *Yankee* also saves 320 square feet of windage and the sail area of a 30-Square-Metre boat or a 42-foot over all racing sloop.

\+ + +

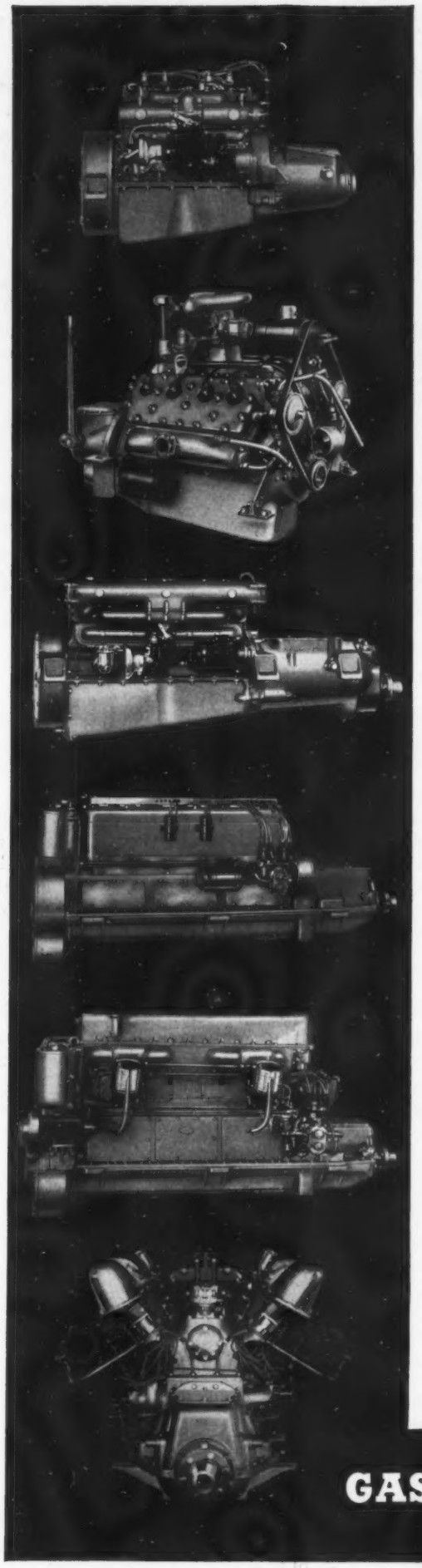
Down East, where the best and smoothest racing waters abound along the Maine Coast, the new Casco Bay Yacht Club has been launched. The picturesque quarters of the club are located afloat, a 110-foot government ammunition lighter with a 75-foot house being utilized. The clubhouse is anchored on Falmouth Foreside shore. A gasoline boat and means of transportation to and from Portland make this an ideal spot for transient yachtsmen. Commodore Nathan W. Thompson, last year's three-star officer of the Portland Yacht Club, is at the helm of the Casco Bay Yacht Club. The new organization will run races weekly and midweekly during the coming season. In conjunction with the Portland Yacht Club, the Casco Bay Y. C. will also run the Monhegan Island race.

\+ + +

The Boston office of Sparkman and Stephens reports the sale of the Ten-Metre sloop *Nachvak* from Albert W. Johnston, of New York, to a New England yachtsman. Through the same office, the 38-foot a.c.f. cruiser *Senga II* has been acquired by Lincoln W. Stoddard of Worcester, Mass.

\+ + +

The 45-foot auxiliary staysail schooner *Northern Light* has been sold from William T. Oakie of New York to H. Harrison Proctor of Boston through the office of Belknap and Paine. *Northern Light*, a sister ship of *Malay*, former Bermuda Race winner, a Roué-designed boat, will sail out of Marblehead this summer.



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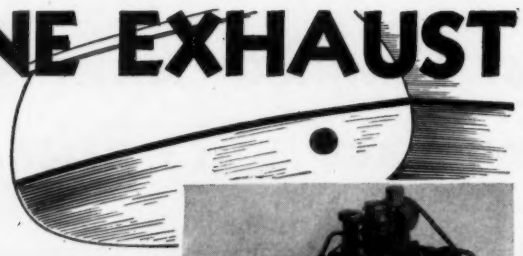

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The new 63-foot twin screw motor sailer *Hathor III*, building at Hodgdon Brothers for ex-Commodore Sydney A. Beggs of the Corinthian Yacht Club, from the board of Belknap and Paine, will be launched the end of this month and go to moorings at Marblehead.

+ + +

The 55-foot mahogany Lawley built express cruiser *Imova*, designed by Walter McInnis of Eldredge-McInnis, and formerly owned by H. Wendell Endicott of Boston, has been sold to Charles P. Washburn of Middleboro. She will be used in Cape waters with headquarters at Wareham.

+ + +

The Eighteen-Foot Knockabout Association, representing the owners and crews of the oldest racing class in Massachusetts Bay, held its thirty-sixth annual meeting and elected Leslie G. Rawding of the Wessagussett Yacht Club to succeed ex-commodore James Finlay as president. The new head of the association is owner of the *Nipper* which he formerly sailed to win the Quincy Challenge Cup. Plans were discussed for the Quincy Cup series which will be defended by the Savin Hill Yacht Club this summer.

+ + +

The Massachusetts Bay 15-Footers have formed an association designed to increase the number of racing boats and membership. Herbert S. Leonard of the South Boston Yacht Club is president and the other officers include Secretary Thomas Moroney and Anthony T. Turner, chairman and director. The new rules permit Marconi rig with hollow spars and "T" booms. A smart fleet is expected to race this year.

+ + +

John G. Alden reports the sale of the 47-foot auxiliary cutter *Valkyrie* to R. P. Benedict of Chicago. *Valkyrie* (ex-*Vagrant*) was built in 1930, from Crocker designs, for William H. Coolidge, Jr., of Boston, former rear-commodore of the Cruising Club of America, who sold her to the Great Lakes three years ago. Alden has also sold the 34-foot Alden yawl *Cynara* to Richard Preston of Boston. Her new owner hopes to have her at Marblehead by the latter part of June. Mr. Preston's former boat, the Casey auxiliary sloop *Bonheur*, has been sold through the same agency to Thomas G. Hunter of Boston.

+ + +

Frank C. Hendry has been elevated from the vice-commodoreship to succeed the retiring commodore, Charles E. Joss, at the helm of the Quincy Club. The Quincy Club, at the tip of Hough's Neck, is one of the oldest organizations in New England. Such noted skippers as Charles Francis Adams, Henry Faxon and Joe Whitton are former commodores.

Great Lakes Breezes

BY R. A. HAYNIE

AMONG the new boats that will be seen on Lake Michigan this summer is Henry Babson's 67-foot ketch, now building at a Maine shipyard. She was designed by Philip Rhodes, and while her owner will use her primarily as a cruiser, she will probably take part in the important long distance races, flying the burgee of the Chicago Yacht Club.

+ + +

The Chicago Yacht Club has formed a Star Class fleet and from present indications eight to ten of these boats will be racing regularly. Frank Marigold will sail *Fram* under Chicago's colors this year, and Bill Faurot is having a new Star built. Haven Requa brought *Parader* from Peoria, and George Dalseg will again be sailing his famous *Bee*. A hot battle for the Star championship of Lake Michigan is looked for this year.

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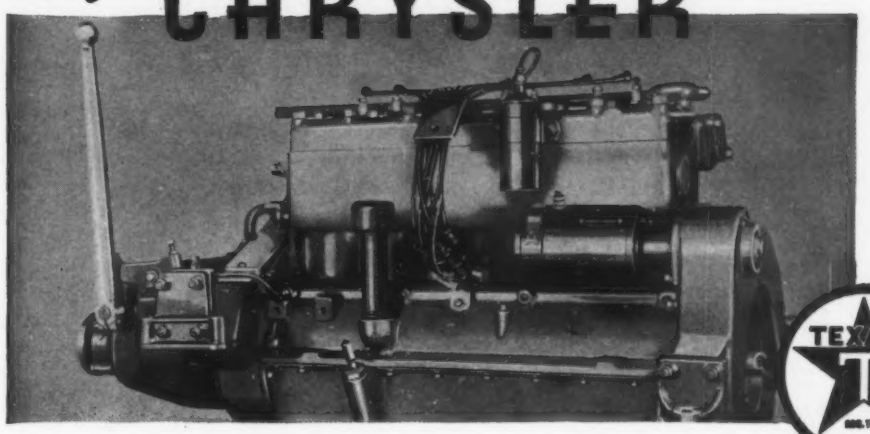

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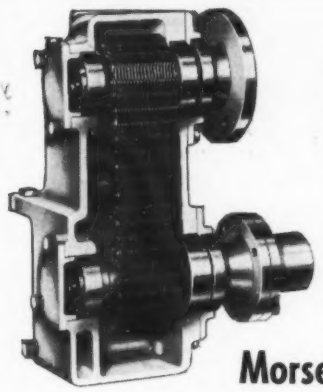

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NRA CODE

Sterling Morton was host to about seventy-five yachtsmen at a luncheon, during January. As a participant and a member of the Mackinac Cup Committee, he conducted an informal discussion of the Mackinac Race, and the possibilities for its improvement.

It was a very enthusiastic affair and some good suggestions were made. Among them, the idea of splitting the time allowance between the start and finish received considerable favor. Under this plan a yacht would be given approximately half of her time allowance at the start. While this would mean that the yachts would be sent away at different times, it is thought that it would be preferable to having them bunch up at the north end of the Lake as so often happens when light winds prevail.

\+ + +

With the idea of standardizing the several different rules governing the measurements of cruising yachts, the L. M. Y. A. has had a committee studying the situation with the hope of arriving at a single rule that would be satisfactory. This committee has now recommended, and the L. M. Y. A. has adopted the recommendation, that all races this year, with the exception of the Mackinac Race, be sailed under the rule brought out by the Cruising Club of America last summer. The reason for the exception is that the rules governing measurements in this race were required to be announced by December first and the Mackinac Cup Committee, for lack of a better rule, declared for the retention of the rule used last year. According to reports, the Cruising Club is again working on its rule, hoping to improve it. The L. M. Y. A. would like to see a rule that could be adopted universally, such as the North American Yacht Racing Union now sponsors in the Universal and International classes. It is earnestly hoped that the Cruising Club will direct its efforts toward developing such a rule. The Lake Michigan Association will assist in every way possible to this end.

\+ + +

E. G. Daniels of the Jackson Park Yacht Club, having sold his cutter, *Anne*, is designing a 35-foot cruising cutter to replace her. The new boat will be of welded steel construction and will probably be out early in the summer.

R. G. and C. B. Hutchins are having built a cruising cutter 44 feet over all. She is designed by Frederic Fenger, and will be ready about the middle of June. Her owners plan to bring her to the Lake where she will make Jackson Park her home port.

Arthur Horton of the Jackson Park Yacht Club has purchased the cutter *Anne* and has renamed her *Sis*.

Nat Rubinkam, commodore of the Columbia Yacht Club, has sold his 43-foot schooner *Rubaiyat* to Bill Redlich, who has renamed her *Wiedersehen* and will sail her under the colors of the Chicago Yacht Club.

Bob Benedict's fine schooner *Bagheera* has changed hands. Bob sold her to John Snite and took the latter's *Valkyrie* in trade. Both yachts will remain enrolled in the Chicago Yacht Club.

Bill Sprague is building a little 26-foot cutter which will be launched this Spring.

Frank Merkle, who has been hibernating for several years at Gull Lake, Michigan, is returning to Chicago and will bring along his "R" boat *Mitzi* to rejoin the Chicago fleet.

\+ + +

The Chicago Corinthian Yacht Club, organized last summer, now has a fleet of some fifteen yachts and has as its home port the newly made Montrose Harbor. The club is a member of the L. M. Y. A. and will take an active part in the Association.

\+ + +

The schedule committee of the Lake Michigan Yachting Association has met and assigned the several major events.

The Mackinac Race is, of course, conducted by the Chicago Yacht Club and will start on July 20th.

The annual L. M. Y. A. regatta will be staged at Milwaukee on Sunday, June 30th. In connection with this, the Chicago Yacht Club will run a race for both the racing and cruising divisions from Chicago to Milwaukee, the former competing for the Dreadnaught Trophy and the cruisers for the Clinch Trophy.

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SYNTHETIC RESINS

On Sunday afternoon, following the regatta, the Racine Yacht Club will conduct a race from Milwaukee to Racine and, on the Fourth of July, the Kenosha Yacht Club will hold a regatta off that port. This should be one of the finest series of the season and will, no doubt, attract a large entry.

Jackson Park will run its annual cruising race to Saugatuck on July 12th.

The Lipton and Nutting Cup races for the "R's" and Eagles will be sailed on August 8th, 9th and 10th.

The annual regatta sponsored by the *Chicago Daily News* is scheduled for August 17th and will be handled by a special committee appointed by the L. M. Y. A.

The Columbia Yacht Club will stage a two-day regatta on August 24th and 25th, in conjunction with a regatta conducted by the Mississippi Valley Power Boat Association.

The Triangular Race — Chicago to Michigan City to St. Joseph to Chicago — over Labor Day, will be sailed under the auspices of the Jackson Park, Columbia and Chicago Clubs, each club conducting a leg.

The Chicago Yacht Club will wind up the season with the annual Autumn Regatta on September 21st.

Jersey Yachting Notes

By CHARLES E. LUCKE, JR.

OFFICERS of the Barnegat Bay Yacht Racing Association for 1935 have been elected as follows: Commodore, Benjamin Adams, Island Heights Y. C.; Vice-Commodore, Cornelius Boocock, Mantoloking Y. C.; Treasurer, Franklin R. Doan, Toms River Y. C.; Secretary, Philip R. VanDuyne, Bay Head Y. C. The Executive Committee, in addition to these four officers, will this year include Edward Adams, Lavallette Y. C.; Chas. E. Lucke, Jr., Seaside Park Y. C.; A. J. Cascaden, Ocean Gate Y. C.; Van R. Greene, Bay Head Y. C.; Edward Crabbe, Toms River Y. C., and T. Debevoise, Mantoloking Y. C.

\+ + +

Raritan Bay, where yachting is making a comeback through the little Comet Class sloops, has just been granted a charter for a fleet of International Star Class sloops. Owners of the Stars now on the Bay are Richard Daunt, *Carina*, Richmond County Y. C.; Jerome M. Wolff, *Ginger*, Raritan Y. C.; Louis P. Booz, *Lucky Lindy*, Raritan Y. C.; and Nicholas J. Williams who used to race his *Catherine* on Gravesend Bay but who will now fly the burgee of the Richmond County Y. C. The addition of the new flotilla, which expects eight boats by summer, gives Jersey six Star Fleets.

\+ + +

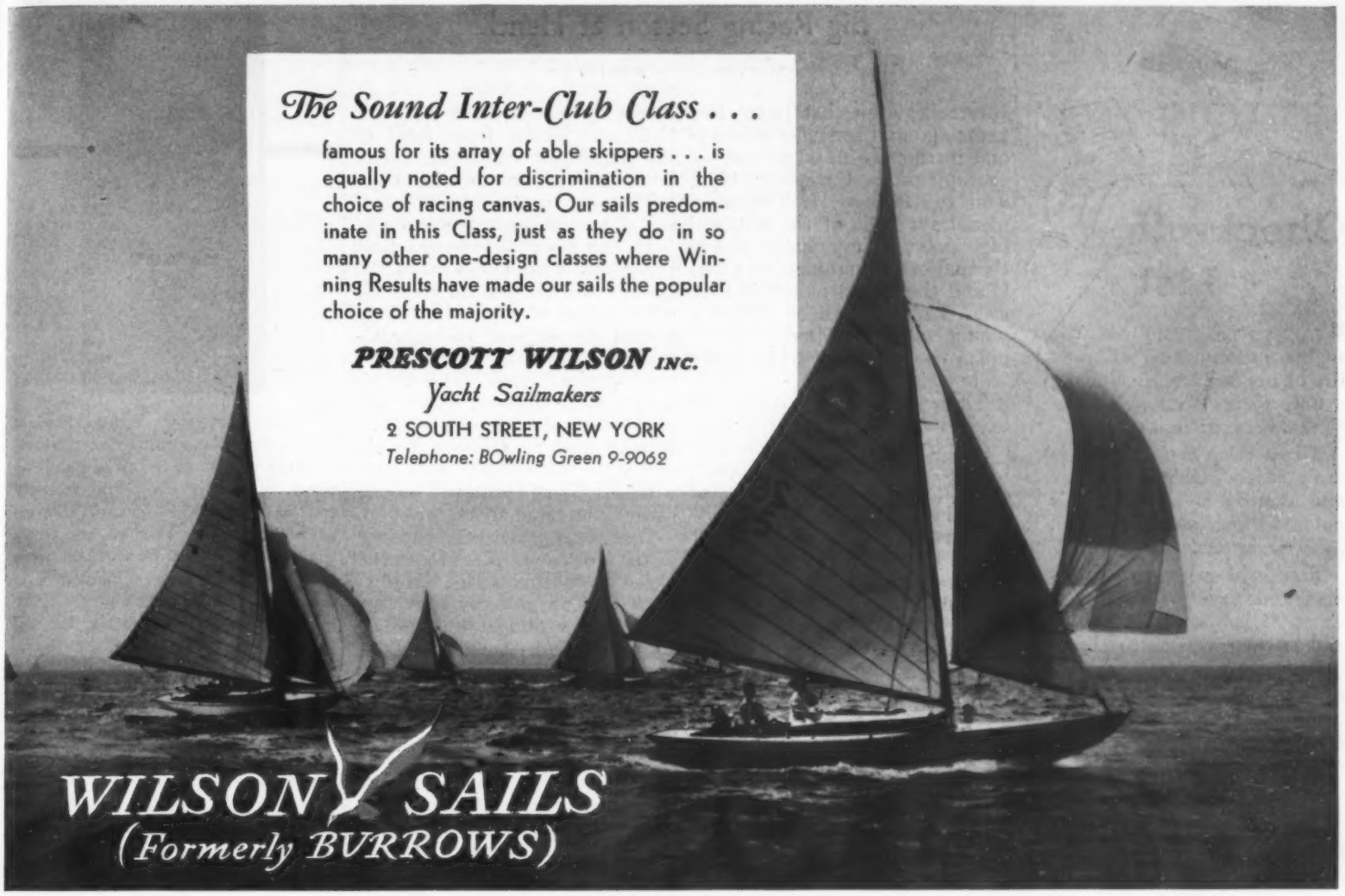
The Money Island Yacht Club, located on the north shore of Toms River near Island Heights, has applied for membership in the Barnegat Bay Yacht Racing Association. Headed by Commodore H. Gilbert Wilson, the Money Island Yacht Club has just been granted a Snipe Class charter and will have fourteen of these little sloops racing this summer.

\+ + +

With the resignation of Henry H. Cross as commodore of the Seaside Park Y. C. the trustees recently chose Charles T. Kline of Philadelphia as acting commodore until the next annual election. Other officers who continue are Vice-Commodore Chas. E. Lucke, Jr., and Rear-Commodore Oliver F. Zurn, 3rd. That club has set August 31st as the date for the seventh annual Bamberger Cup series for Stars.

\+ + +

Headed by Britten Chance, a special committee of the Barnegat Bay Yacht Racing Association is attempting to formulate rules for the Class E or bilgeboard scow racing which will enable the old and the new boats to compete on equal terms this summer. As these speedy craft are far from a one-design class, the committee, composed entirely of skippers in the class, has a difficult job on its hands. As if this job in itself were not enough the winter meeting of the B. B. Y. R. A. ruled that this committee consider modifying the rules to permit the use of parachute spinnakers.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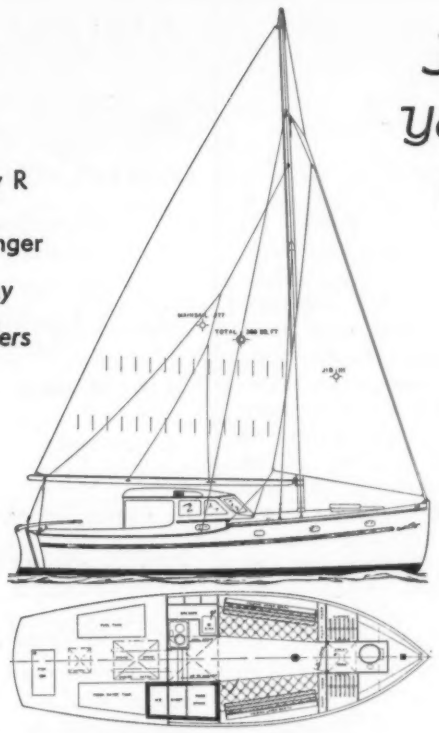

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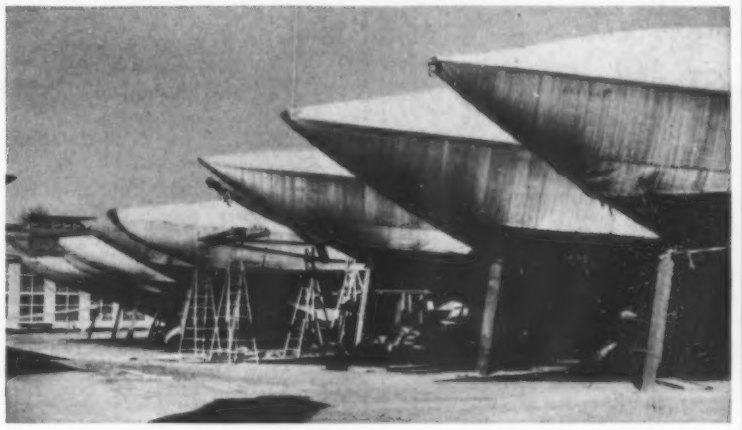

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Read our full page ad in Show Number of YACHTING

Big Racing Season at Hand

(Continued from page 82)

Intercollegiate champion two years ago and last year was second in the two national scoring championships. Carlisle, in 1933, won the George H. Townsend medal symbolic of the national high point championship and is the national champion in Class C and the record holder in that class. Coleman, an enthusiastic young man of Miami, Okla., holds the record of 61.75 miles an hour in Class F.

There is going to be some outboard record breaking this year, especially in the International Class X, in which Jean Dupuy, captain of the French outboard team in Florida last year, holds the present mark of 65 miles per hour. Efforts to displace that record are going to be made in England, Italy and America. It would not be surprising to see a record of 70 miles an hour set up — which is considerably celerity for a little 14-foot boat with a detachable engine.

If present plans mature our most glamorous regatta will be the international affair at Detroit. In the first running for the W. D. Edenburn Memorial Trophy I cannot see what can prevent a field of something like forty to fifty 225-cubic-inch hydroplanes unless each country is restricted to a team of three boats or less. I have had enthusiastic letters from most of the important European motor boat drivers announcing their willingness to race at Detroit if suitable arrangements are made.

It has been announced that the Gold Cup event at Lake George will include no races for other types of boats but there should be a field of approximately eight craft for the Gold Cup contest itself. The President's Cup regatta, under the able management of John A. Remon and L. Gordon Leech, should be a "corker" this year with President Roosevelt as one of the interested spectators.

Joel Thorne, last year's winner of the Townsend Medal and the Col. Green Round Hill Trophy, went to Europe early this year to do some midget automobile racing. He is a student at London University and is preparing to bring over a British outboard team to compete in our intercollegiate regatta at Worcester in June.

The foregoing is only a sketch outline of some of the plans under way for this year's motor boat racing. If only half of them materialize and are supplemented by additional events now a-borning it will be a wonderful season, indeed.

Ocean Racing in Australia

(Continued from page 77)

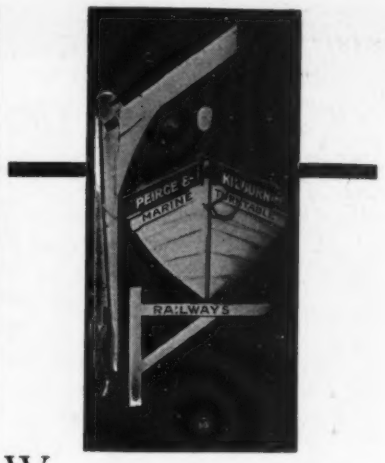
The more ambitious race from New Zealand again had an international flavor, as the two ultimate starters were the jib-headed ketch *Te Rapunga* (Maori, signifying "Longing") of Germany, approximately 32 by 11 by 5 feet, and the gaff-rigged sloop *Ngataki* (Maori, signifying "Abode of the Elect") of Auckland, New Zealand, approximately 35 by 12 by 5 feet.

Te Rapunga is a world wanderer, having left Germany in 1930, manned by Dibbern and Schramm. After cruising in the Mediterranean, she crossed the Atlantic to Panama, and remained on the West Coast of the United States from September, 1932, to August, 1933. Honolulu saw them next, and they spent Christmas of 1933 in Samoa. New Zealand was reached in March, 1934, and so they were on the spot to enter the race.

Ngataki is a "home-made" craft, a full-bodied, husky ship with transom stern and "V" bottom which was built by her owner-skipper, Mr. Wray, and completed about a year ago. She has already made ocean voyages and had only returned from a trip to some of the Pacific Islands a few days before the start.

The race started from Auckland on December 8th in heavy weather. A bad leak and some broken gear caused *Te Rapunga* to put into Russell, where the boat was beached and necessary caulking and repairs attended to. This meant a delay of 44 hours, but Dibbern lost no time in setting off on the long chase after *Ngataki*. With her handicap of 17 hours, *Te Rapunga* was 61 hours behind *Ngataki* on finally leaving for Melbourne.

The usual "mixed grill" of ocean conditions was reported by both competitors and, after two weeks or so, both yachts were reported by Australian coastal steamers which had sighted them entering the wide eastern entrance to Bass Strait. *Te Rapunga* was leading by a substantial margin and the positions were unchanged at the finish line in Port Phillip Bay, 1,630 miles from the start, which was covered by *Te Ra-*



WHILE near New Bedford Harbor this summer, be sure to visit the new building adjoining the Whaling Museum on Johnny Cake Hill recently erected by the Old Dartmouth Historical Society of New Bedford, and enjoy the additions to the famous collection of ship models, whaling equipment, and other historical features.

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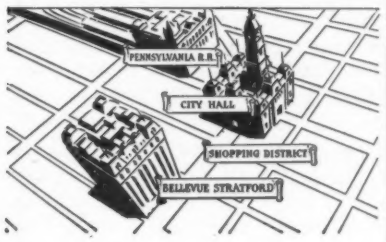

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punga in 19 days, one-half hour.

On the same day that the New Zealand Race finished, the first two Tasmania Race entrants also arrived. After handicaps had been adjusted, Mr. Bennell's *Oimara* was declared the winner, her elapsed time being 31 hours, second place being taken by the gaff-rigged ketch *Phyllis II*. The dimensions of the latter are, approximately, 50 by 14 by 5 feet. Her owner is D. R. Oxley.

The finish was most exciting, both yachts being reported from the Heads within one minute of each other, a tribute to the navigation of *Oimara* over the 200-mile stretch across the Strait. Then followed a 30-mile chase up the bay, but the bigger and faster *Phyllis* could not pick up her time on *Oimara*, and so Mr. Bennell registered his second win in this strenuous event.

The simplest way to describe Bass Strait weather is to mention that the Parallel of 40° South — "the Roaring Forties" — passes through the Strait. On this occasion boisterous winds and heavy seas were encountered, but only minor damage was done to gear.

It is interesting to note that the 48-foot ketch *Thistle*, owned by Dr. J. Bell-Ferguson, and the yawl *Shamrock*, an enlarged "Sea Bird" type, 38 feet long, which finished in third and fourth places in this race, were the winner and second boat respectively in the original Bass Strait Race of 1906.

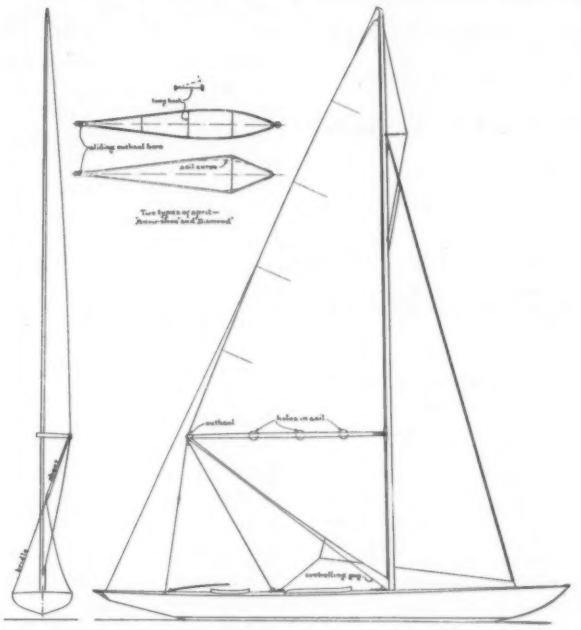
With the many additions to the cruising fleet in recent years, and the countless interesting ports within a few days' sail of Melbourne, there is no reason why ocean racing should not continue to grow in popularity. It would seem, however, that it is not truly within the province of the average yacht club to guide the destinies of this sport, and that the formation of a special cruising club is the first step.

The High Clewed Sprit Mainsail

(*Continued from page 83*)

working of the sail. It has been tried on a small scale and works well.

The cross-braced double sprit seems to solve the problem of strength and lightness for large sails, the number of cross rods being varied to suit. A single additional rod adds much to the strength. There is also a possibility that the diamond sprit may be made to close up to the width of the ordinary boom when the sail is down.



I believe that this sail and rig are more efficient than those in common use. To me it is the natural outcome of experiments which I have been making for many years, searching for a practical sail and rig which would stop the loss of power due to the twisting of the sail. Others, I have heard, have been working along similar lines. Some Frostbite dinghy sails are being developed in this direction, particularly that of Sidney Herreshoff's *Frost Fish*. Fenger's main trysail with the wishbone sprit is something in this line but with a different object in view, I suppose. At any rate, the models seem to show that, with wind abeam or aft, something different happens from the behavior of the conventional sail, and the sail may be trimmed properly for windward work without lacing it down hard.

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American Pilot Boats

(*Continued from page 51*)

her portrait, in Lubbock's recent book, "The Opium Clippers." In passing, it may be mentioned that the *Independence* was unusually large for her type and date, measuring 85′ 6″ length over all and 22′ 6″ beam. At least two other pilot schooners were purchased by the Navy before 1853.

Toward the end of the 1830's there was a change in the topside appearance of the Sandy Hook pilot schooners which can best be illustrated by the striking *John McKeon*, built by Isaac Webb in 1838. Built for a company of New Jersey pilots, she seems to have had a short and tragic career, going down with all hands (six men) in the terrible hurricane of July 28th, 1839. It was thought that she was stove in by the fall of her masts. Her lines are presented in Figure 2, and indicate a fast and powerful vessel of large displacement and capacity. Her body is carried well into the ends and the flaring topsides give great stability. It is of interest to note that the *McKeon* had a rockered keel and some hollow in the water lines forward. The big rig of this schooner is shown in Figure 5; the foot of the fore course was spread by a squaresail boom, of course. One of the marked characteristics of the pilot schooners of 1812–1840 seems to have been extremely long lower masts, combined with very short topmasts. The *McKeon* also shows one of the intermediate steps in the development of the counter from the old transom-counter of early times.

In the '40's there were more changes in the design of pilot boats, brought about by the success of John W. Griffiths' experiments with the very hollow entrance as an intentional feature of design. In 1842 he attracted much attention with the design of the successful clipper ship *Rainbow*, and he also wrote extensively in support of his theories. At first, the pilot boat builders do not seem to have been much impressed, due, perhaps, to the fact that they had been using a slight hollow in the entrance for many years, though without bothering to investigate the matter, as Griffiths had done quite thoroughly.

Gradually the hollow entrance became of more interest to the builders and they experimented most conservatively with it. Such a conservative experiment was the Steers-designed *Mary Taylor*, built in 1849. She had somewhat more hollow than had been used previously. This schooner was a great success and attracted wide attention to the principles of her design and to her designer as well. Hence, after 1850, we find the hollow entrance an acknowledged feature in fast schooners.

The rivalry between the various builders of pilot boats and the sporting proclivities of the pilots and their friends made the racing of these boats take on tremendous importance. As a result, there was a continuous search for high speed. Griffiths was now preaching the theory that drag of keel and great deadrise were unnecessary — in fact, harmful — in hulls designed for speed. His ideal was a shoal hull with sharp and hollow ends and with little deadrise. In short, the type that he supported was, in the schooner rig, best exemplified in the Essex-built clipper fishermen of the '60's and '70's. Capable of high speed, this model was the most unsafe that could then be chosen for going to sea in winter.

Nevertheless, pilots adopted the shoal hull and for a few years hulls similar to that of the *Jacob A. Westervelt* (her lines are shown in Figure 3) were popular. The *Westervelt* exhibits many features that later became more or less typical of a large group of pilot schooners. She had the round stern and the exaggerated tumbling in of the stem as well as the low freeboard and strong sheer. The *Westervelt* was built in 1853 and had a big reputation for speed. It is obvious that she would be extraordinarily fast as long as she did not put her rail under, just as was true, later on, with the fast Essex-built clipper fishing schooners.

The long, hollow entrance and the straight, flat run were carried to unusual proportions in this schooner. Such boats carried large rigs, of the common fore and aft type, fitted with fore topmasts. Unlike many of her sisters, the *Westervelt* was not lost through stress of weather but on April 20th, 1858, was run down by the steamer *Saxonia* some 270 miles off the Hook, with the loss of one pilot. The pilots are said to have preferred the shoal schooners to the deep ones because their motion in heavy weather was easier and they were not as wet. This bears out the well-known argument on behalf of centerboarders for sea work. I have found no record of centerboard schooners being used off the Hook, but the pilots of the southern ports used them with great success.

Returning to George Steers, it

is apparent that he did not support the Griffiths theory in regard to drag and deadrise, at least in schooners, for he followed his *Mary Taylor* with the *America*, of more deadrise and drag, then with the two fine pilot schooners, *George Steers* and *Moses H. Grinnell*, along the same general lines as those of the *America*.

The lines of the most workmanlike *George Steers* are shown in Figure 4 as an example of Steers' mature practice. This beautifully modeled schooner is worthy of special attention. I think her run is a slight improvement over that of the *America*, and the balance of her ends is quite remarkable. Her depth is sufficient to insure safety and her midship section is such that a reasonable amount of initial stability is obtained. The similarity of the *Steers* to the *America* is striking, though the *Steers* is much smaller. This schooner was undoubtedly one of the finest pilot boats ever built, though in later years she would have been considered small.

It is notable that Steers' pilot schooners were not posted as having foundered. The *Grinnell* was cut down by a steamer in 1863, as was the *Taylor*, while the *Steers* went ashore on the Jersey coast near Barnegat in the bad northeast gale of February 12th, 1865, with the loss of all hands (five men). This was the fate of many fine pilot boats when running for shelter during gales from that quarter, while others piled up on Long Island during easterly and southeasterly gales. Truly, the fate of a pilot boat was rarely a happy one; she generally met her end while on station.

From 1855 on, the Sandy Hook pilot schooner became a combination of the ideas expressed in the *Westervelt* and *Steers*, the features of the *Steers* predominating. The close relationship of the Boston and New York boats, after 1855, will enable us to follow the development of the pilot schooners after that year when we discuss the Boston type. The plain and simple rig of the *Steers* is to be seen in Figure 5; it is one that could be used to advantage in small schooners now, did the racing rules allow it. The importance of the pilot schooners can best be illustrated by their influence on yachts. Nearly all schooner yachts until 1870 were on the same general model as the pilot boats, the culmination of that type being the fast *Sappho* and the big *Enchantress*. It may also be said that the influence of the pilot boats on the yachts was a healthy one and it is a pity that it did not last longer.

The end of the sailing pilot boat did not come until the twentieth century, when steamers and auxiliaries of a nondescript character took her place.

A Jolt to the Experts

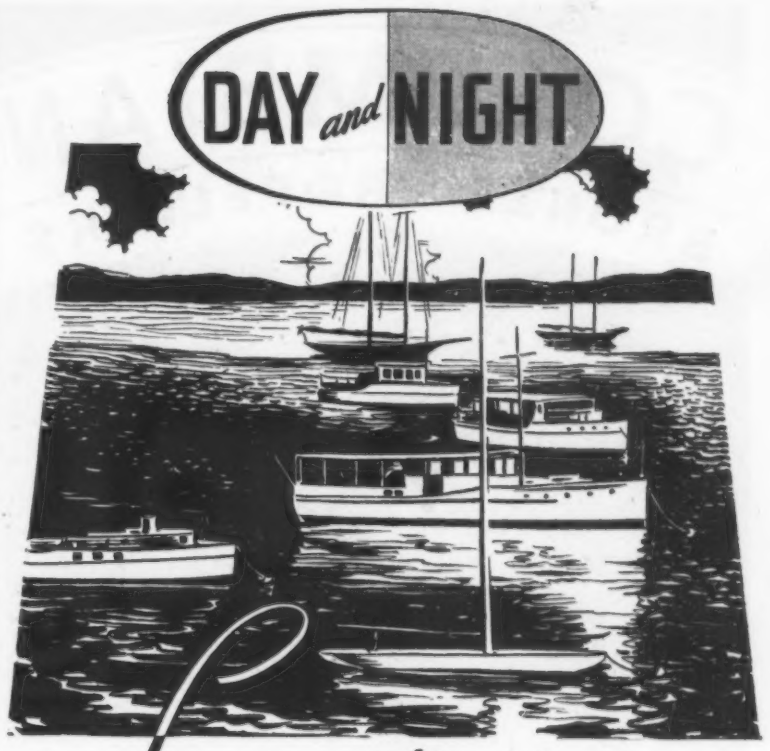
(Continued from page 64)

me when I state that *Jollity* (25 feet l.w.l.) proceeded between these two points under sail alone at the rate of ten knots. Anyhow, she did. Ten knots, over the land, no stop watch aboard, but the time taken to seconds and the distance taken from the chart. And the chart just there says: "Spring ebb, 2½." At the time, it was three and one-half to four hours after high water and two days after highest springs. Assuming, however, that *Jollity* had a two and one-half knot tide with her, she sailed through the water at seven and one-half knots.

This is impossible on paper, but it did happen. The fact is, *Jollity* is a successful freak; but I see that it is no use trying to explain her achievements. I shall not be believed; but in justice to a boat which I have maligned, I shall state what I have seen her do.

This "waste of good wood" sailed through rough water in a strong beam wind at approximately seven and one-half knots. She worked to windward in a fresh breeze, against the short and steep seas of the Thames Estuary, with such an easy, gentle motion that she did not make my wife seasick, which is no mean feat. She kept four people comfortable, dry, warm and happy during a ten-day cruise when it rained and blew most of the time. She amazed me, and everyone we passed, by her speed to windward, especially against a head sea. She annoyed her designer so much by her slowness when running dead before it that he threatened her with a parachute spinnaker. She ran beautifully before half a gale under mizzen alone, needing little steering. She worked to windward against a strong tide under her Genoa alone, just for fun.

She sailed herself under most conditions and never needed more than a finger on her tiller. She stood up stiffly under full sail in a blow so strong that it burst her brand new foresail. She handled like a dinghy. And she even made me think she looked beautiful!



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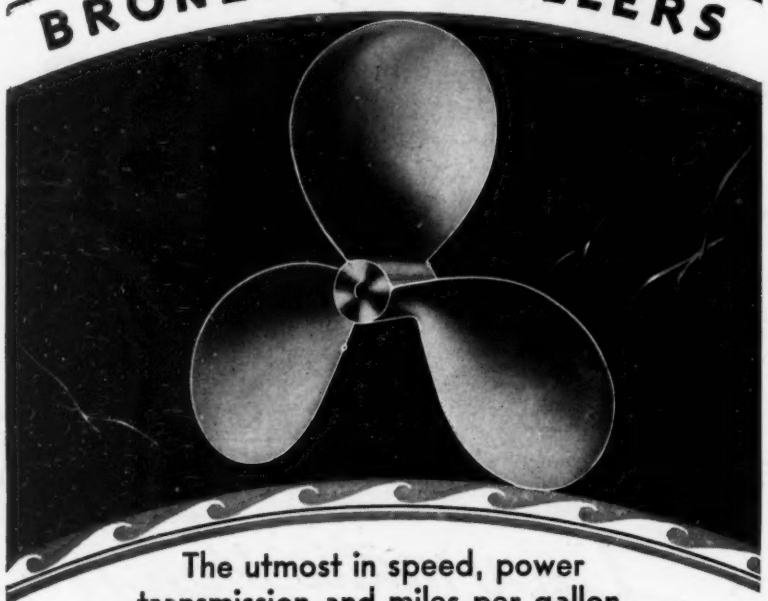

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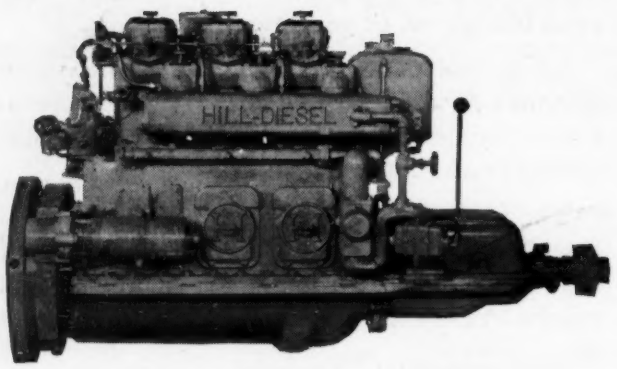

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Spring House Cleaning in the Engine Room

(*Continued from page 59*)

on the chart, it will decrease vibration to install an intermediate bearing, either in the form of an extra strut or a steady bearing in the deadwood.

Checking the propeller for pitch and balance is a technical problem which we shall not discuss in detail here. However, if there is any question in your mind that the propeller has been damaged, by all means have it checked by one of the firms which specialize in this work. No one single item will add as much to speed as a propeller properly balanced for weight and true in pitch throughout all of its blades. A couple of hours can be spent very profitably by any owner in checking over and tightening up the nuts on the bolts which hold the strut in place or the stern bearing on the deadwood, as vibration is apt to work these bolts quite loose; the looser they become, the more rapidly they loosen still further.

Other bolts whose tightness should be checked are those that hold the wooden engine beds to the floor timbers. Due to the seasoning of the wood under the service conditions for the particular hull, these beds may shrink, leaving the bolts slack. It may even be necessary to fit wooden wedges between the top of the floor timbers and the bottom of these wooden beds before setting hard up on the bolts. Many cases of severe vibration have been cured by the simple expedient of tightening up all engine bed fastenings and making sure that the various parts bear one against the other.

Checking over the electrical equipment should be made a complete chapter in itself; we can touch only a few of the high spots. Storage batteries are subject to rapid deterioration unless properly looked after. If the battery has been left in the hull without attention over the winter, the chances are that it will need careful going over with several cycles of charge and discharge before it is ready for use in the spring. If it will take a charge properly, it can be used with fair assurance of satisfaction. If, however, one or more cells do not take the charge as they should, a new battery is needed. Battery terminals must be cleaned and well coated with vaseline to prevent corrosion.

Avoid the use of long leads from the battery to starter. Even should it occasion much trouble and some expense to relocate the battery to make these leads short, by all means do it. The voltage drop in long starting cables is far higher than would be imagined unless checked by actual measurement. In one specific case, a voltmeter connected between the battery terminals while the starter was in operation registered five volts, and only three volts between the terminals at the starter. Shortening the cables, by relocating the battery and using a solenoid starting switch, decreased the voltage loss to one-half a volt. In another case the starting cables were shortened by 21 feet, more than doubling the available voltage at the starter.

Commutators and brushes on both the starter and generator should be cleaned. If the brushes are badly glazed they should be renewed. All ignition wiring should be looked over to ascertain whether or not insulation has been worn away by friction or whether it has become cracked and brittle. It should be renewed wherever necessary and all terminals made secure.

Breaker points should be smoothed up with a special point file or, better yet, should be turned over to an experienced mechanic for refacing. Points should be set to give the proper gap as instructed by the manufacturer of the device used.

Today, when practically every motor uses an automatic spark advance, this part of the ignition device must be looked after carefully and checked to make certain that it does not stick either in the retarded or advanced position and that it will advance as the speed increases. Many cases have come to the writer's attention in which a falling off in speed was due to sticking of the mechanism which advanced the spark. A little cleaning and a touch of lubricant brought back the original speed.

If the propeller, rudder, or struts show signs of corrosion, now is the time to fit zinc slabs to protect them. Place the slabs in actual metallic contact with the part to be protected and hold them there by countersunk head machine screws threaded into the protected part. Be sure to make templets giving the exact location of these screws so that you can have extra zincs made up and ready to put on in case you haul out during the season. You may find most of the original zincs gone in six to ten weeks if corrosion is very severe.

Now to consider a part of the installation about which I am a crank — the controls. Scarcely a boat goes into the water with a satisfactory set of spark, throttle

and reverse gear controls. Only once in a hundred times are these anything but a sloppy, rattling, collection of ill-assorted levers and bent rods. To get an accurate control of the throttle, the most sensitive of the controls, a carefully thought out and planned piece of engineering is demanded. By planning the angles of the levers and connecting links the throttle control should be so arranged that the movement of the lever at the steering wheel or on the bridge starts to open the throttle slowly for a considerable movement of the hand lever, the opening of the throttle increasing rapidly as it approaches the full open position. Too often the slightest movement of the hand lever at bridge or wheel will set the motor to racing wildly at the very time when a delicate control is demanded. Refer to the article beginning on page 41 of YACHTING for March, 1933, in which the subject of controls is discussed in detail. No simple change will give any greater satisfaction than a throttle which creates the proper response at the motor, and nothing is more aggravating than the average throttle hook-up.

Cap'n Josh Slocum

(*Continued from page 66*)

damp, ant-resisting wood, such as molave, which are sunk into the ground. The sills are kept six feet above the ground for safety and health as well as to afford a place for storage. The corners are secured by wooden pins, but otherwise the whole structure is ingeniously lashed together at the joints with rattan and twisted fiber.

Having due regard for the typhoon that flattened houses and even swept away whole villages, this house was stayed, fore and aft as well as athwartships, by stout ropes of twisted rattan securely fastened to the ground. This was something that had never been done before in the barrio. The governor of the province heard of it and came to pay a friendly and approving visit.

Shipbuilding conditions at Olongapo were as primitive as they well could be, for, as far as plant facilities went, it was as though this were the first vessel ever to be built. Monkeys screeched and scampered from the trees as they fell to the woodsmen's axes. Tagal sawyers ripped the timber into scantling and plank by hand, using a single frame saw. A power bandsaw would have been an unspeakable joy, but in the East man power must be used where it can be. The log to be sawed was horsed up high enough for a man to stand under it; the sawyers worked in pairs, the leading man on top, and the other to guide the saw on its downward stroke. It was hard, slow work, paid for by the foot, according to custom. The frames were hewn to shape by narrow bitted axes with straight helves. Our broadax was not to be thought of. The timber felled in the mountains was hewn into square logs before it was dragged out, and, considering that some of the wood was nearly as hard as the native's primitive axes, that alone was an awful job. The log was hewn skid shaped on one end into a sort of a nose with a diagonal hole in each corner to hook the carabao to. The carabao, as the water buffalo is called, is the most useful animal in the Philippines. When tamed, it is docile with its native masters and also with the children of the household, who may do anything with it — play around its heels or even use the beast's tail as a means of climbing upon its back. But a carabao surely hates even the scent of a white man, which it can perceive at a considerable distance when the wind is right.

When the pile of hand sawed timber grew to a starting point, a gang of Chinese ship carpenters was imported from Manila to do the building. Though peculiar and slow in their methods, they are excellent mechanics as anyone may see by examining one of their native vessels. In the European-controlled shipyards in Kowloon and Shanghai they grow to be more efficient, and there a gang of Chinese boatbuilders will do a better job on a copper fastened teak lapstrake boat than is done anywhere in the United States.

These Chinese, imported from Manila, were a savage lot and under the control of a patrone. He resented the Jackson contract being given to the Captain and planned either to seize or destroy the vessel. So great was his enmity that his son attempted, six years afterwards, to stab the Captain while ashore in Manila. To seize the vessel would have been motive enough, for piracy at that time was common in the seas adjacent to China. Even at present the maritime Chinese easily revert to piracy as an industry, if opportunity offers.

As the frame of the steamer

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(Left) The Galley on the auxiliary schooner yacht "Savannah" showing Monel Metal sink, dresser tops, utensil shelves, bulkhead sheathing, etc.

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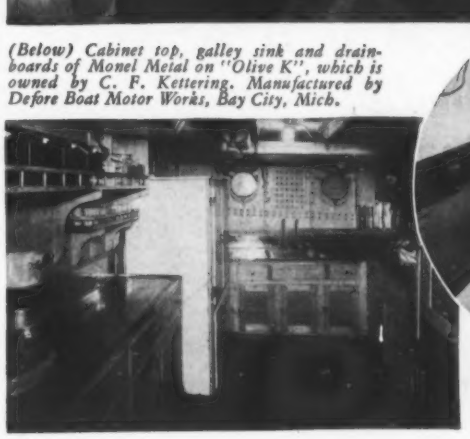
(Below) Cabinet top, galley sink and drainboards of Monel Metal on "Olive K", which is owned by C. F. Kettering. Manufactured by Defore Boat Motor Works, Bay City, Mich.



(In circle) Monel Metal sink, cabinet top, drainboard, and splash-board in serving pantry of C. F. Kettering's yacht "Olive K".

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went up, it soon became evident that treachery was afoot. One night, while the Captain was away on one of his periodic trips to Manila, my mother was alarmed by the shouts of the Tagals who surrounded the house. She could see by the light of their torches that they were all armed with axes. Fires were lighted and a guard was placed over the house for the night. The reason for this warlike assemblage was clear, though never explained; the faithful Tagals had scented a plan by the Chinese to murder the family during my father's absence. It became clear, as well, who were our friends, and no overt act was again feared.

A still more insidious plot was laid, however, and that was to block the launching or capsize the vessel on the ways. The Captain kept a sharp watch on the Chinese but, as it afterward proved, not quite sharp enough. When the final preparations were made for launching and the dog shores were knocked down, the vessel came to a stop after moving down the ways for a short distance. Investigation proved that the ways had been shifted out of line. There was no hydraulic jack nearer than Hong Kong with which to meet this emergency.

Then a remarkable thing happened. The Tagals took things into their own hands and, as though a tocsin had been sounded, there began to be a muster of carabao; carabao came from everywhere and were gathered at the sides of the ways and preparations were made at once to hitch them to a hawser from each bow. It was not an uncommon thing for the Tagals to drag their small vessels into the water thus, so why not do the same with this larger vessel if there were carabao enough to be had?

There was a tumult as drivers mounted the animals and got them in line for one mighty, concerted pull. When all was ready, they started a chant which rose into a shout which might have shattered the walls of Jericho. The carabao fell in with the idea, stretched out, dug into the sand, surged ahead on the hawsers and away they went into the sea, buffalo, men, ship and all.

There was tumult again, above which the Captain shouted "Que nombre?", for the vessel had never been named. "Tagadito, Tagadito," they yelled back as the newborn vessel took her bearings on the water, and *Tagadito* she was. Translated from the Tagalog, this was said to mean "Of this place." She was their ship, for had they not saved the day?

The new steamer was towed to Manila and finished in the Pasig, where she received her boiler and engine. After the trial trip, the Captain took over the 90-ton schooner *Pato*, and at once prepared her for sea. It was in consideration of the *Pato* as part of the contract that the Captain was led to undertake the building of the *Tagadito* under circumstances so unusual.

Though the *Pato* was built in the Spanish Philippines and designed by an Englishman, she was also closely related to the American schooner *Sappho*.

The schooner yacht *Sappho*, by outsailing the *Livonia* in the America's Cup races, became queen of all sailing craft, and was called "the fastest piece of wood that was ever put together." In no part of the world was her fame more lauded than in Chinese waters. Anglo-Saxon blood is the same, wherever transplanted, and is always keen for good sport. Admiring the *Sappho*, Mr. Jackson had designed the *Pato* on her modified lines, as suited a commercial vessel, but retained the high, flat floor of the racer.

After making some inter-island trips, the *Pato* was awarded a charter by the underwriters of a British bark which had just been wrecked on North Danger Reef, lying in the China Sea about 420 miles from Manila. She was laden with the usual valuable cargo carried from China to England, consisting of teas, silks and camphor.

The *Pato* found the bark hanging by the forefoot to the edge of the coral, ready at any time to slip off and plunge down into the abysmal depths of water under her heel. There was not a soul on board. After cutting away both the fore and mainmasts, the crew had been taken off by a passing vessel.

The weather held off and remained moderate while the *Pato* was ranged alongside and filled hold, cabin, and decks. In two weeks, the *Pato* made three round trips between the wreck and Manila, where the salved cargo was safely stored, but at the fourth, the wind shifted and raised a sea. This soon ground up the wreck which twisted around sideways to the wall of the reef, causing it to unhook the forefoot and sink.

The *Pato's* next venture was a cargo to Hong Kong, where all the Captain's plans were changed. While overhauling her gear there, some splitting knives left over from Cook Inlet days were found in the locker. Memories of that glorious adventure were stirred and it was then settled that the *Pato* was to become an Okhotsk Sea fisherman.

(*To be Continued*)

California's Mid-Winter Regatta

(*Continued from page 57*)

Geraldine Joyce's *Flying Cloud* won decisively the first day and was in the act of repeating when her mainsail split. Whereupon Dick Schayer's husky yawl *Cheerio II* waltzed into a long lead which was good not only for the race but the series and the most coveted trophy among the "Forty-Fives." J. M. Herndall's *Merope* was second, and Douglas Radford's *Sindbad* third.

In the sloop and yawl division only one boat turned out, Arthur Stewart's cutter *Tehani*. After two sail-overs she was awarded the trophy. The good old ketch *Ahmeek* won both days in the schooner and ketch division over Burton Baldwin's *Trade Wind*. Every regatta has its comedy boat and this time the *Ahmeek* was the victim. She split her Genoa, set her ballooner upside down and, after her jib carried away, finished the second race as a sloop, although that is not her conventional rig. Poor Charley Page who sailed her had to endure the joking, while we slovenly lubbers who were really responsible joined in the laughs.

Off Cabrillo Beach on the 24th a regular armada of small craft, 83 to be exact, competed for the junior sailing titles. Space permits mention only of the winners. These were: International Snipe Class: *Hoyden*, P. Serrell. Twenty-Foot Restricted Class: *Y-H*, Pritagle. Sixteen-Foot Restricted Class: *Lark*, H. Lawhorn. Thirteen-Foot Restricted Class: *Mine*, D. M. Callis, Jr. Starlet Class: *Fey*, V. O'Davoren. Rainbow Class: *Skippy*, Woodward. Skimmerette Class: *No Name*, D. Hall.

The regatta was sponsored by the Civic Regatta Association and sanctioned by the Southern California Yachting Association. The responsibilities of host fell to the California Yacht Club and James M. Webster acted as chairman of the race committee. Thanks are again due the Coast Guard for patrolling the course and picking up boats disabled in the blow of February 23rd.

All Ready For Spring Painting and Varnishing!

(*Continued from page 54*)

You can't do a good painting or varnishing job with a dirty brush, or one hardened up with old paint. Keep your brushes in a bath of linseed oil — this keeps the air out, and they won't harden or stiffen up. Brush out the oil before using. (Don't keep copper paint brushes in oil — for reasons already given. Either clean them thoroughly with turpentine or gasoline, or keep them in a can of water for a day or so — or keep them in the copper paint itself.)

If you have a good paint brush which has been allowed to dry and harden, you can bring it back to life by softening and cleaning in liquid paint remover, followed by a thorough washing in a lukewarm solution of washing powder and water. If the brush is a cheap one, throw it away and buy a new one.

When through painting or varnishing for a spell, clean your brushes thoroughly with "turps." Brushes of good quality are a good investment if you keep them in good condition — which most amateur painters don't do.

Never varnish in cold weather if you can avoid it. If you must, place the varnish can in a bucket of warm water as long as you are using it. Don't thin it out unless absolutely necessary but, if you must, use pure turpentine.

Some paints come thicker than others — the makers make them that way purposely. Read the instructions on the can — the makers know more about their product than either you or the boss painter in your boat yard.

Don't paint or varnish on a damp day, and never paint over a surface which isn't absolutely dry and clean. Those blisters you fell heir to last year were unquestionably caused by painting on a damp surface.

Paint or varnish dries very slowly indoors, even though the room or garage is fairly warm. Plenty of air and sunshine is the formula for quick, normal drying.

"Wet or dry" sandpaper, used with water, will do the work in half the time, with half the work, and last far longer than dry sandpaper. It's sloppy work, but well worth the inconvenience at times — such as when you are working on a horizontal surface.

To thin out enamels, use linseed oil, or whatever the maker recommends — turpentine ruins the gloss. Use "turps" for thinning flat paints.

And last, and most important of all, don't forget that proper preparation of the surface is more than half the battle. Thorough cleaning, plenty of sandpaper, all the elbow grease you can muster — that's the only way to be sure the paint and varnish will give the results they are capable of giving.

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Getting There—And Back

(*Continued from page 55*)

With the buoy abeam, I hauled her to what I thought was a couple of points to the left and started on the five-mile run to Cross Rip Lightship, which I figured we would see or hear in some fifteen minutes. The swing was answered by the compass card, but it kept on going until the N point cut the lubber's line. By this time I realized that the compass needle had lost its directive force, and I knew of nothing we could do to it on board that would help.

Luckily, the haze blew away as the wind freshened a little from the nor'west, the lightship loomed up where it should be, and when we changed course to WNW for the run to the entrance to Vineyard Sound we could see the land on Cape Poge and the shore at Oak Bluff, on the Vineyard, just off our port bow. The day gave promise of being fair.

Breakfast over, I turned the wheel over to the skipper and taking the compass in its box up forward, away from any possible mass of metal, I had the ship's head swung through an arc to note the effect. The result was just as bad as before; the magnet seemed to have lost nearly all of its directive force. Sometimes it would come to rest with the NNW point on the line, sometimes with the SSW diamond pointing to the ship's head. With no spare compass on board, not even a small one, we were out of luck.

Talking it over, we decided that since the day was now clear, and we would have land in sight all the way down to the Race, and from there in through the Sound, that we would take a chance and keep on. If it showed signs of thickening up we would duck into the nearest port at the first sign of decreasing visibility. Right there is where we made our mistake.

Past Nobska and down Vineyard Sound, with land on both sides of us, the little cruiser stepped along at her best and the shores slipped by almost as the countryside does in a car. The lack of a compass did not bother us here and it was easy to fall into the habit of many power boat operators of not running on compass courses when in sight of the shore. Vineyard Lightship lifted ahead, and about eleven o'clock came abeam, and we headed boldly across for Point Jude. The sun shone brightly and the shore was a dark blue line receding farther away to the northward all the time. But just the same there was a feeling of uneasiness, of uncertainty, that I had never before felt in a boat whose compass I could rely upon implicitly.

Early in the afternoon, with Block Island just forward of the port beam, the wind began to back southwest and lighten. We had been steering by it, as much as by the distant land, on the run across from the Vineyard. Now we found it taking us away from the land, instead of parallel with it. For some reason the horizon was not clearly defined ahead, or to the southward, but we didn't sense or feel the reason for this.

We were looking anxiously for Watch Hill as a guide to steer by, but it didn't show, and then, before either of us knew it, there was no horizon anywhere; the wind faded to almost nothing, although our speed had made its dying hardly noticeable, and the first damp smell and feel of fog chilled us. Blind as we were, with nothing but our hearing to give us sense of direction, my first thought was to turn tail, run back out of the fog and make for Newport, in the hope of reaching there before the fog bank rolled in. Swinging in a circle until we recrossed our outward wake, we straightened on it in a reverse direction and stepped the speed up a peg, while we watched our new wake streaming straight astern until lost in the fog some two to three hundred feet behind us. We must keep it straight at all cost.

Five minutes passed, then ten, and still there was no sign of thinning in the fog, no sight of the sun or blue sky. We swore softly. The fog had evidently rolled in from seaward and had already enveloped the coast. We were surely in a jam. Should we keep on as we were going and try to pick up Point Jude fog signal and run for Newport, or swing around once more and try to make the Race in the hope that the fog would lift; or should we stop and anchor while the water was shoal enough to let our none-too-long cable reach bottom?

Neither of the first alternatives was alluring, with a rocky coast and narrow entrances shrouded in fog to run for if it didn't clear when we arrived and absolutely no directive force aboard. Nor did the inactivity of anchoring in the open appeal to us. First, we must find out what the tide was doing. But my friend evidently didn't figure much on tides with a 15-knot boat, and there was no tide book on board.

Also, when I asked him to get a cast of the lead, I discovered there was none on board. Now, the skipper knew better than this. He could do coastwise piloting and knew the value of good equipment. But he had become so accustomed to running in Long Island Sound in daylight, where none of his runs were over a few hours in length, that he hadn't realized the necessity of providing real navigating equipment. So, with the wind now completely gone and not even a ripple showing on the water to give us an uncertain sense of direction, we decided to anchor. There was just enough cable to give a fair scope in the ten fathoms of water the chart showed. It would do — unless it breezed up. If it did, it might blow the fog away. If it didn't! So we let go and looked at the time — ten minutes to three. Then we both laughed.

For a while we strained our ears in the hope of picking up a fog signal, either siren or bell, from some lighthouse or buoy. But there was no sound save the lap of the water under the little boat's stern as she rolled easily in the long swell. Besides, I discovered there was no light book on board and the only way of identifying such a sound, should we hear one, was from the meager information on the coast chart.

After some two hours without a sound breaking the stillness, we heard the faint blast of a steamer's whistle, one long and two short, signifying a tow. For some minutes afterward we failed to hear it; then it sounded again, nearer by now, but not much. Gradually the sound became louder. She was coming our way, but which way was she headed? We had been slightly to the north of the steamer lane when the fog had shut in. This sound should, therefore, be to the south of us. I looked at the compass, but it gave no help for it showed the sound to be to the NE. It must be wrong. To get the hook and follow the tow meant that we might get afoul of her string of barges, and, anyway, we wouldn't know whether it was bound east or west. We were better off where we were. The tow boat passed not far from us, but invisible in the murk, and we had other dreary hours of waiting without a sound.

Night was coming on, black, murky; the drip of fog from the standing roof was a dismal sound. Shortly after nine o'clock we heard a whistle from what we supposed was one of the Sound steamers bound from Narragansett Bay to New York. We must have been right in the fairway, for she passed us too close for comfort. For an instant we thought of getting our hook and following blindly, guided by her whistle. But then we realized that many of these steamers made from 18 to 20 knots, and that our speed of 15 knots would soon drop us behind, out of ear shot. No, better stay where we were, as there was yet no indication of wind. We stayed.

About three in the morning a puff of air blew from some direction, we knew not which. Suddenly we looked aloft and saw stars. The fog was thinning. Then a flash of light stabbed the night and was gone. It came again and this time remained steady. A little later, as the fog blew away before the offshore breeze, a red flash punctured the steady white. I grabbed the chart and studied it carefully. Watch Hill! Counting the seconds, there could be no mistake. Now other shore lights were coming out here and there. The breeze was northerly — the fog would soon be gone. In the east the sky was beginning to lighten. In another hour it would be daylight. We had been inactive long enough. Time to get the hook and be on our way. That damned compass had caused us delay enough.

As the sun came up we were sliding through the Race and Long Island Sound was opening up ahead. No need for a compass in these conditions—but then one could never tell.

Too many power boat skippers, particularly if they own fast boats, neglect their navigating equipment, and do not use it as they should. The constant use of the compass on this boat, and the steering of set courses on all runs would have showed up its sluggishness and told the observant skipper that something was wrong. Also, a spare compass should always be carried, but this is seldom done on a power cruiser used alongshore. It will often come in handy. Even if the standard doesn't go bad, someone may put his foot through it. And a compass is no good unless it is correct. So its deviation must be ascertained. It is not hard to find your compass error and make a deviation card. But this story is not the place to tell how to do it. There are plenty of books on the subject, and a compass adjuster will take the kinks out if you can't do it yourself. But by all means know your error.

Oh yes — and don't forget a light list, and a lead line, and a barometer, and other aids to accurate navigation. There's no telling when you may need them.

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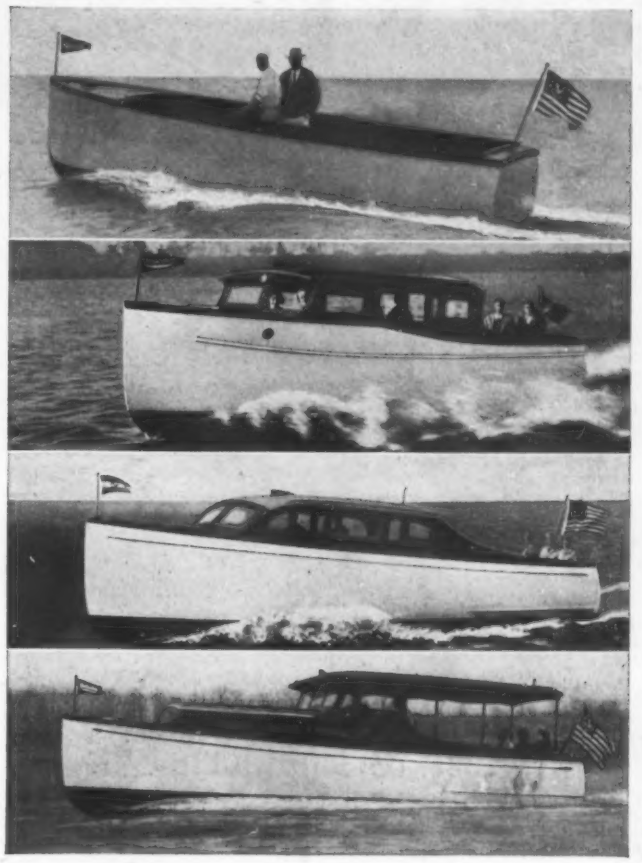

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Which Course to the Eastward?

(*Continued from page 48*)

course she sailed was not the determining factor. Toward the end of the race the wind came out ahead and the order of finish was precisely the order of the ability of the four yachts to go to windward.

The Plymouth Race

So now we come to the race of 1931, the winning of which by *Dorade* seems to many to be the clinching argument in favor of the northern route. The race started off Brenton Reef, R. I., and finished at Plymouth, England. *Dorade* eased sheets on the starboard tack before she was out of Block Island Sound. She skimmed close to the Island of Nantucket, crossed Georges Shoal, passed north of Sable Island, and saved a mile wherever there was one to be saved. At the expiration of nine days *Dorade* had put two days between her and her nearest competitor, and it was by this margin that she finished ahead of *Landfall*, the second yacht to arrive at Plymouth. *Landfall*, like all the others with the exception of *Skål*, took the southern route, fell into calms and light airs in the Gulf Stream, and did not begin to show her speed until *Dorade* had the race in the bag.

Skål, the exception, rates a paragraph to herself in this discussion of Transatlantic courses. She is the great mystery of 1931, due to the fact that her owner and navigator recorded his positions on only eight of the twenty-one days she was under way. On the sixth day, in Longitude 52°:37′, she is shown as having worked up to Latitude 42°:58′. Her next noon position, three days later, puts her in Latitude 43°:36′, Longitude 48°:18′, and the inference is permissible that she crossed the lower tip of the Banks. With but one intervening position, the record shows her eight days later 100 miles north of the great circle route, from which unnecessarily high position after three days she proceeded to a fix a few miles south of the direct course, and about 200 miles west of the Lizard. Having thus zigzagged across the ocean, following no logical track, *Skål* distinguished herself by finishing only a day behind *Landfall* and taking second prize on corrected time.

Conclusions

Coiling up, we see *Henrietta* winning the race of 1866 and following a northerly course; *Coronet* winning that of 1887 and following a southerly course; *Atlantic* and three others in 1905 sailing the southerly course and finishing ahead of four which went north; and *Dorade* winning in 1931 along the northerly route and showing her heels to nine others sailing in lower latitudes. The score thus stands two and two for the winners of the four races.

But it occurs to me that there is more to the argument than meets the eye in this skeleton record of past performances. The race of 1866 was sailed in December in a succession of winter gales. There was little danger of meeting ice off the Grand Banks, and there was every inducement to the competitors to take advantage of the northern route's shorter distance. In March of 1887 there was also more than enough wind north and south, but it is worthy of remark that "Bully" Samuels, who had sailed the *Henrietta* to victory in 1866, ordered a southerly course for *Dauntless*, and that the captain of the *Coronet*, remaining even longer in the Gulf Stream, defeated him. In May of 1905 the four which went across the Banks met with lighter airs than those which sought the Gulf Stream. Of twenty-five yachts that have raced to England, *Dorade* is the only one that has defied precedent, chanced the calms of the Nova Scotian and Newfoundland coasts, and won in doing so. And, in consideration of *Dorade's* enviable record in other long-distance events, it is too much to say that she won merely because she sailed the shorter course.

Before having done with this interesting subject I call attention below to the fast passages made by ten yachts of which I happen to have detailed records. Although some of these were racing yachts, none of them was in competition at the time she made her passage.

America, New York to Le Havre, June–July, 1851 — 21 days.

Alice, Boston to the Needles, July, 1866 — 19 days, 8 hours, 50 minutes.

Sappho, New York to Queenstown, July–August, 1869 — 12 days, 9 hours, 36 minutes.

Vigilant, New York to Tory Island, June, 1894 — 14 days, 8 hours.

Lasca, New York to Fastnet Rock, April–May, 1894 — 16 days, 13 hours.

Yampa, New York to Lizard, May–June, 1897 — 15 days, 15 hours.

Endymion, New York to Bishop Rock, June–July, 1900 — 12 days, 16 hours.

Ingomar, New York to the Needles, April–May, 1904 — 15 days, 9 hours, 25 minutes.

Westward, Brenton Reef to Bishop Rock, April–May, 1910 — 13 days, 3 hours, 50 minutes.

Brilliant, Block Island to Bishop Rock, June, 1933 — 15 days, 23 hours, 31 minutes.

It is not so much in the fast times of these ten yachts that I am interested as in the fact that none of them sailed within 100 miles of Cape Race, and that only three — *America*, *Alice*, and *Sappho* — crossed the Banks at all.

It appears, then, that it is the traditional thing to avoid the foul currents, the fog, and the slack air of the Banks and to risk the calms and squalls of the Gulf Stream in making the eastward passage. And in my opinion there are many reasons for doing the traditional thing, and only three for choosing the northerly course. As it is simpler to name the three than the many, I conclude with them:

First reason for crossing the Banks: When eastbound in the western Atlantic, a yacht should always take the starboard tack if headed.

Second reason for crossing the Banks: A yacht should at all times sail with eased sheets in rough water.

Third reason for crossing the Banks: *Dorade* won by doing so in conformity with the first and second reasons.

(To be Concluded)

Silver King of the Gulf

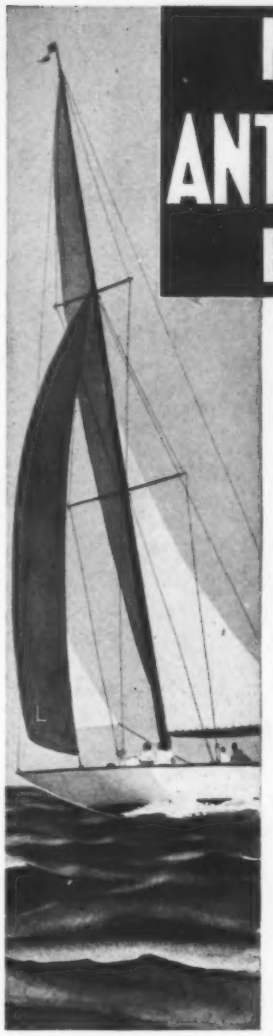
(Continued from page 61)

within ten seconds or less of the time he feels the hook, and will often make a double or triple leap, flashing out with incredible speed after scarcely entering the water from the preceding leap. It is not unusual for a tarpon to clear the water by ten or twelve feet in this first mad, wild leap for freedom. If the angler finds his fish still hooked after the first two or three jumps, he may be reasonably sure that the hook is fairly well embedded. There is no "proper" method of hooking a tarpon. In my opinion luck plays a large part; if the hook happens to be set against one of the bony plates in the tarpon's mouth, no amount of striking will drive the point into it. Two or three short, sharp jerks will suffice to set the hook if it happens to be turned right, and a man can learn how to do this only by experience.

Tarpon run much larger in some localities than they do in others, but generally speaking a 150-pound fish is a good one and a 100-pound fish nearer the average. As a matter of fact, I believe that a fish weighing about 80 pounds puts up the most spectacular fight. A 175-pound fish is a prize to be proud of, and if you catch a 200-pounder you get into the newspapers. Two hundred and thirty-two pounds is the world's record tarpon and was caught in the Panuco River, near Tampico, by W. A. McLaren. There is excellent tarpon fishing to be had all along the Gulf coast of Mexico and Texas, but I have limited my observations to the Florida coasts because I am more familiar with fishing in those waters.

Nothing that I can say about weather conditions will be worth anything to the tarpon fisherman. Every man with good sense knows enough not to go out when a hurricane is brewing. As far as the tarpon is concerned, he'll bite when he jolly well feels like it — regardless of time of day, time of tide, direction of wind or position and intensity of sun. Stay with him until he starts to feed — that is my only formula for catching the Silver King. No other fish that swims is so unreliable about his feeding habits and the more we study him the less we know.

In closing, I should like to offer a few observations. These may be contrary to the observations of others. I make no apologies, however, and am prepared to argue. First, a tarpon leaps clear in a perfect arc, entering the water nose first and with scarcely a ripple unless he is hooked and thrown off balance by the line. When leaping to escape a shark or for the pure joy of leaping he makes a long, symmetrical leap with no splash. He does not come out with a great flurry of water, as if there were dippers on his silver sides, but knifes out with hardly a splash. (And I say this in the face of ten thousand cover paintings!) Of course, he makes a splash when he falls back into the water — anything would. Second, a tarpon cannot escape a big shark if the big shark sets out to get a tarpon. It is commonly believed that only a hooked tarpon will fall victim to



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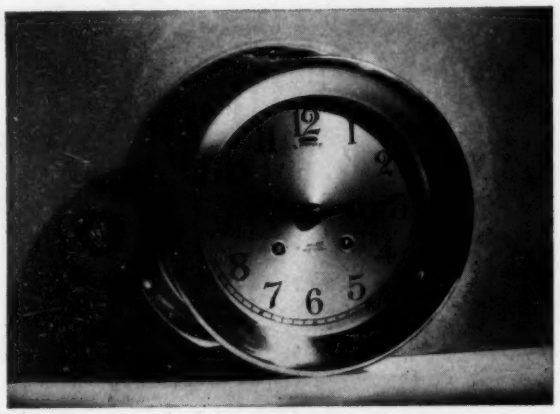

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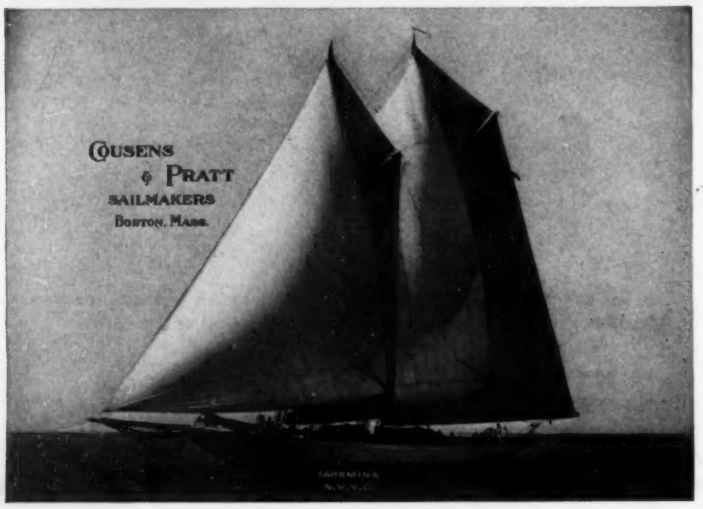
New York City Sales and Service — Minneford Sales Corp., City Island



a shark. This is not so. Times without number I have seen a big hammerhead go into a school of tarpon, cut one out of the bunch and run it down. The tarpon exhausts itself in a series of high, wild leaps and does not use its natural speed to good advantage.

I have deliberately avoided the subject of tackle. You will choose your own, anyway. I can say what I like: a 9-ounce tip, a 4/0 reel, a 12-thread line. For the novice, a 12-ounce tip, a 6/0 reel, a 24-thread line. I do not like very light tackle, for when a tarpon has finished his jumping the fun is over. The sooner such a fish is brought to gaff or release hook the better for all concerned, particularly for the other fellow in the boat. Pumping in a sulky, tired tarpon on light tackle is a great waste of time. Also, a fresh fish will jump just as high and as often on medium tackle. There's only one answer.

But wherever you go — Texas, Mexico, Florida, Cuba — give the Silver King a break. Whip him in a fair fight. Glory in the power of his rushes, the magnificence of his leaps, the beauty of his coloring as he comes alongside, tired and weak from the struggle. Then, release him, gently, carefully, and wish him luck! Your guide will do this if you insist on his doing it, and you'll sleep better at night.

On the Building of a Yacht

(Continued from page 73)

transformed into a pull on the shrouds and stays, which immediately convert the force to a crushing stress on the mast. All that is required of a mast is that it have wood enough in it to withstand the crushing stress, and stiffness enough to remain straight between the points at which the shrouds and stays are made fast. It is better, therefore, to take the wood out of the center of the mast and distribute it on the circumference where it will do the most good.

Like many of the operations in the building of a boat, the proper making of a hollow spar depends largely on the integrity of the builder, and somewhat on his skill. After it is made one cannot tell what it is like inside. The wall thickness should be the same all around, and should diminish as the spar gets smaller in diameter in order to produce the maximum strength and lightness. Figure 5 shows some sections cut from masts which were defective and have broken.

The best wood for spars is Sitka spruce which comes from the Pacific Coast. It is obtainable in long lengths, is clear, straight-grained and of reasonably even texture and weight.

Masts are being made with a greater diameter fore and aft than athwartships, more or less oval in section. This is necessary because there can be no fore and aft support below the forestay, whereas there can be as many shrouds as are considered desirable; therefore, the mast should have its greater stiffness fore and aft.

By all means have a well made hollow mast in preference to a solid one, and give your boat all the advantage you can; the only difference in cost is about one-third more for the bare stick.

Rigging

Until about ten years ago, practically all standing rigging was what we call 6 by 7, which means seven wires in a strand and six strands laid up into the rope. Now we have the so called 1 by 19 airplane wire which consists of one rope of nineteen wires. This is stronger for its size and more rigid than the old 6 by 7, causes less chafe in a sail which might lie against it, and jib hanks and snap hooks slide more smoothly over it.

Flexible running rigging, formed of much finer wire than standing, consists of nineteen wires to a strand and six strands to the rope, making what is known as 6 by 19. This is easily handled and spliced.

There is coming into general notice rigging of stainless steel. Some of this does not seem to have quite the even qualities of the old galvanized plough steel wire, but apparently it has an indefinite life while plough steel has to be renewed frequently. It has slightly more elasticity and costs more. It is probable that it will come into general use.

In place of manila, linen rope is being used more generally. Originally developed for balloon purposes, it is lighter and much stronger than manila, and lasts longer.

When we had the round or slightly out of round mast, the stays and shrouds were looped and applied around the mast; now, with the odd shaped masts and the demand for rigidity and neatness, the use of metal tangs screwed and bolted to the mast is pretty general. Tangs add to expense; in fact, every modern tendency in design and equipment demands greater and

greater expenditure of money. For instance, the early Six-Metres built in 1922, carrying around 4700 pounds of lead, cost about $4,000 for hull, spars and rigging. A Six-Metre of 1932, carrying about 6400 pounds of lead, cost $6,000, hull, spars and rigging.

The hourly pay of workmen in 1932 was exactly the same as in 1922. The price per pound of lead was the same. The cost of other materials was about even, and the percentage of overhead and profit happens to be the same in both instances.

Therefore, the *requirements* for a Six-Metre in 1932 are $2,000, or 50 per cent greater than in 1922. I see no tendency towards simplicity and economy; as a matter of fact, the converse is true. Yet the "kicking" about cost has risen by God knows how much. It doesn't make sense — that's all.

To return to the rigging. The sheaves through which wire rope runs should be as large in diameter as possible and the grooves should fit the rope.

Galvanized steel turnbuckles may be used if you will take pains to keep them greased, but bronze are much better and are more practical. The splices at the lower ends of rigging should be served with wire to allow the water which runs down the rigging to escape. All blocks should have roller sheaves except those which must endure extreme stress, and in these metaline bushings should be used.

Materials

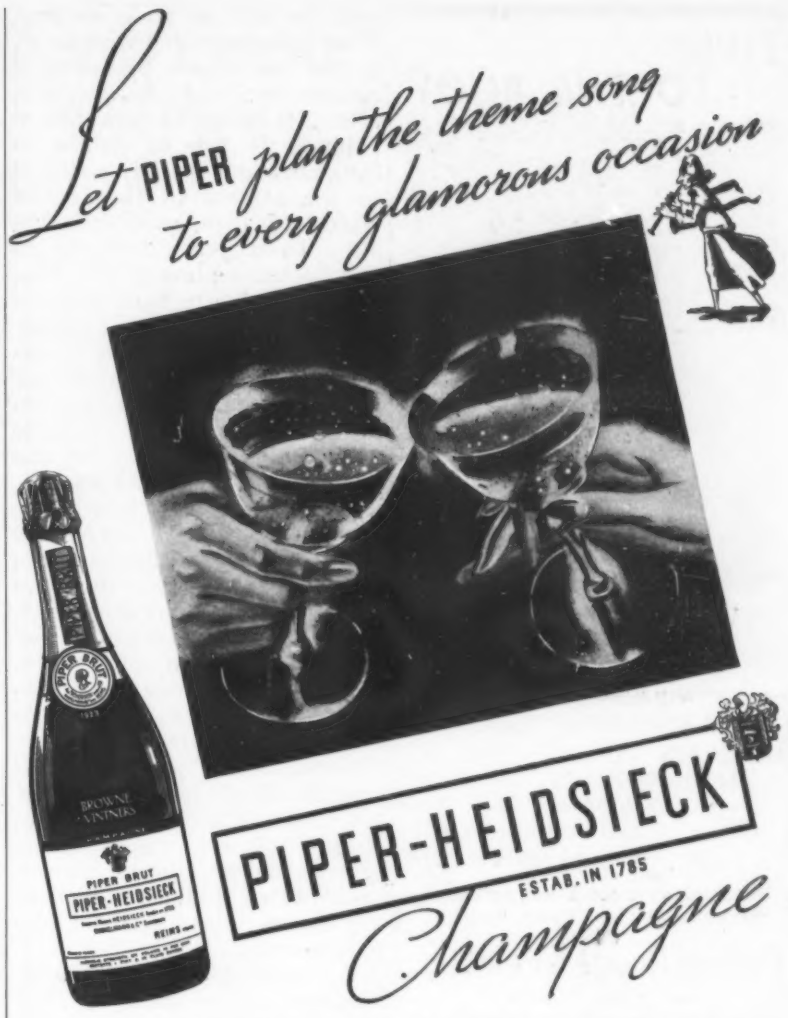
The proper selection of materials for the various parts of a boat is vital to her life, strength and appearance.

Oak is in general use for frames, keel and deck beams. There are considerably more than one hundred different varieties of oak in this country, almost all of them worthless for use in boats as they are most susceptible to the attack of the rot fungus. Only the straight white oak, indigenous to the New England States and some parts of New York and Ohio, should be used. It is unobtainable commercially in lumber yards. One has to find a lumberman who is operating in the proper locality and get him to save the right kind of trees, paying him a good price for them. The rotten stems, sterns and keels which have to be renewed every year bear testimony to the fact that good white oak is not being generally used. In this connection, interesting data has been compiled from the records of the past ten years of a certain yard. Every sail boat between 30 and 50 feet water line length with which that yard had experience was taken into consideration. Of the total number involved one-sixth were built by one builder of high reputation, while five-sixths were built by good, bad, and indifferent builders. Of the one-sixth, not a single one has ever had rot in her or exhibited any major structural defects. Of the five-sixths, 28 per cent had rotted or had had some major structural repairs made. Since good oak can still be had with a little extra trouble and expense, this is a striking commentary. Eventually Philippine mahogany will be used as a substitute for keels, stems, etc., but, so far, no dealer has been willing to import large sizes of this wood on the chance of selling a small quantity of it. I know of no substitute for white oak for steam bent frames, but probably the supply of this smaller timber will last throughout our lifetime.

For planking, long leaf yellow pine, Philippine mahogany, white cedar, Mexican mahogany, Oregon pine and, on account of its high cost, a limited amount of teak, is used.

Probably yellow pine, rift sawn, is as good planking as one could want. It is getting scarce and, being practically unobtainable in a dry condition, a substitute has had to be found. Philippine mahogany is probably the logical wood to use. It is excellent for the purpose, lends itself to modern kiln drying, and is reasonable in price. It also has the advantage of containing no tannic acid so that there is no action on fastenings. White cedar is used chiefly for small boats and dinghies. It is still obtainable and is the material best for the purpose. Mexican mahogany makes, probably, the best planking next to teak. Outside of teak, it is the most expensive and is not enough superior to Philippine to make its use practical, except in boats such as racing sail boats, commuters, and high speed power boats. Oregon pine is the least desirable of any of the woods mentioned.

Teak is, of course, the best planking of all where its weight (about fifty-five pounds to the cubic foot) and cost do not prohibit its use. This is the finest and most durable of all timber used in yacht building. The best comes from certain localities in India where the natives girdle the trees about three years before they are to be cut so that they may be dry enough to float down the river. In handling the logs elephants are used. There are beams in old temples which are known to be 2500 years old



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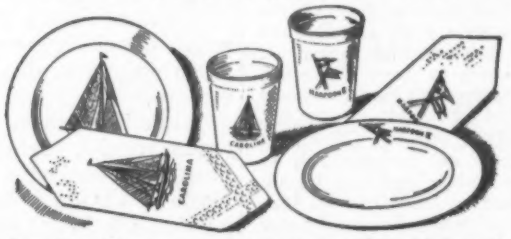

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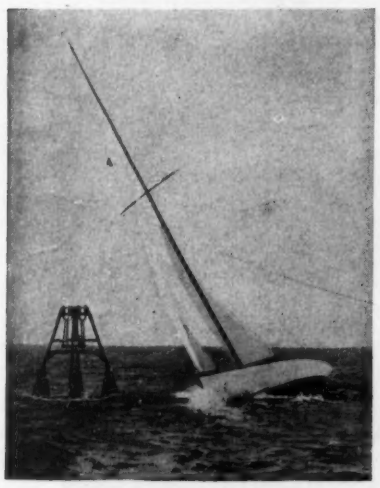

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and are still as good as ever. Teak is impregnated with an essential oil which preserves it against rot and the weather, even if it be left unvarnished or painted. It has no action on fastenings and is fairly resistant to the attacks of the teredo. Its cost is high, varying in the last fifteen years between 40 and 80 cents a board foot. Also, it is expensive to work because in the fiber of the wood appear small particles of what seems to be silicon which quickly dull tools, forcing the workman to expend a great deal of time "sharpening up." But its fine qualities make it worth its cost.

All planking must be cut free of sap wood, which is the outside wood of a tree underneath the bark. Sap wood has not yet matured and will invariably rot. Paint will not adhere to it because it absorbs so much water.

For clamps, shelves and stringers, Oregon pine comes into its own. It is obtainable in long lengths, clear and straight-grained, springs nicely and is not too heavy. For skylights, deckhouses, rails, etc., where the use of teak is prohibitive on account of weight and cost, mahogany is used and answers the purpose well.

For decking, we may use teak, Michigan white pine, or Port Orford cedar. Happy is the owner and crew of a boat that has a teak deck; its weather resisting qualities make it the easiest of all woods to take care of. Under sanding, scrubbing and the action of the weather, the color becomes a light, soft gray, handsome and grateful to the eyes. Though the surface may become shabby through neglect, just underneath is the fine old wood, unharmed and unaffected.

Michigan cork white pine uppers used to be the standard for decks, and a fine wood it is, but now it is scarce and expensive. As a matter of fact, a white pine deck today costs fully as much as one of teak. There are a number of white pines that have been used as substitutes for the Michigan varieties, all of them inferior.

Beware of a California sugar pine deck. It is a fine looking wood but worthless for use on the exterior of a boat. It rots quickly and the sap mildews and turns black.

Port Orford cedar is a West Coast wood and is the logical substitute for white pine. It is a fine white wood and stands the weather well, though it is not as close and even-grained as the Michigan pine. Under present market conditions it should be used where weight and expense prohibit teak. Its cost is a little more than one-third that of teak.

All decks should be laid of quarter or rift sawn lumber, which means that the surface presented is at right angles, or nearly so, to the annual rings in the log. If the wearing surface is cut parallel to the annual rings, slivers will eventually appear. For the sake of economy, where possible, decking should be square, as almost any square cut from a plank will be rift or quarter sawn on two of its sides. Have brass or bronze screws used in your deck instead of nails. They hold better and do not rust.

The interior joinerwork may be made of almost any wood, so that the choice is a matter of personal taste. Whitewood, white pine or some of the composition boards, for painted work, or mahogany and butternut, varnished, are sound choices.

(To be Concluded)

A New Rig for the Six-Metre "Viking"

(Continued from page 81)

is that the new rig, with a smaller but taller mainsail and a larger fore triangle to allow increased areas for spinnaker and jibs, will make *Viking* faster on all points of sailing except, possibly, in turning to windward in strong breezes.

While it is too early yet to recount results, racing men have been impressed with the showing made by *Viking*, being interested particularly in the way she acted with a smaller mainsail. The mast has been stepped nine inches further aft than formerly and the base of the fore triangle increased by fifteen inches. The jib halliard block was raised two feet ten inches, increasing the height of the fore triangle from 29 feet 2 inches to 32 feet, the maximum allowed under the new rule. The area of the jibs was greatly increased but the mainsail was reduced, to offset the larger fore triangle, by raising the boom at the mast 28 inches so that the boom now droops at the after end.

The Bermuda Six-Metre tryouts for the April international races will be under way when this appears in print. Among other "Sixes" racing will be the Howard Trott Syndicate's *Achilles*, Lloyd Jones' *Sea Venture*, J. Seward Johnson's *Swallow*, Chandler Hovey's *Jill*, and probably *Lucie*, owned by Briggs Cunningham. Paul Shields may also take *Challenge* down.

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SEAMSEAL
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The major item in any caulking job is labor. Cost of material is small. Eliminate the nuisance and expense of frequent re-caulkings by using SEAMSEAL, the modern seam filler compound that lasts for years. SEAMSEAL has a gum base that stretches and holds to planking regardless of strain, changes in temperature, weather, or water. It does not dry out and chip. Apply with a putty knife. Try it now. You will be pleasantly surprised. Write for nearest dealer's name, or order direct.

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Builders of the famous Potter one-design class B sailing dinghies and 20' motor sailer.

FAIRFIELD BOAT WORKS
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Of Interest to the Skipper

Yacht Brokers Consolidate

THE yacht brokerage office of H. H. Jennings Co., of New York, has been closed and the business is now being carried on by the firm of Ford & Payne and W. J. Roué. Herman Jagle, who has been with the H. H. Jennings Co. for thirty-seven years, is associated with Ford & Payne and W. J. Roué as general manager.

The H. H. Jennings Co. was the oldest established yacht brokerage firm in the United States, having been the successors to the Thomas Manning Yacht Agency which began business in 1873. Mr. Jennings and Mr. Jagle learned the business with Manning, starting as boys.

The firm of Ford & Payne and W. J. Roué grew out of the G. W. Ford Yacht Agency which was founded in 1910, in New Rochelle, N. Y., and in 1918 took over the business of Stanley W. Seaman, established in 1900. In 1934, having been indirectly connected with the firm for about ten years, William J. Roué, naval architect of Halifax, Nova Scotia, designer of the famous fishing schooner *Blue Nose*, came to New York and joined them. The firm maintains offices in mid-town New York, at City Island and in Canada.

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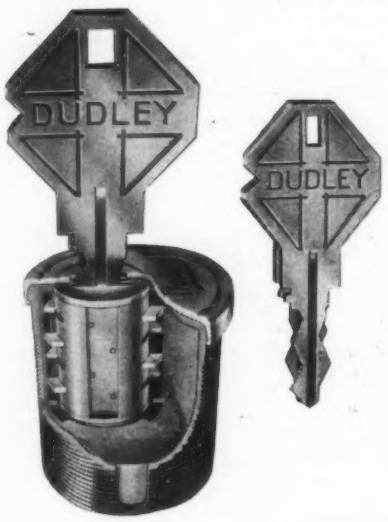
Pick-Proof Locks



A NEW lock that defies the efforts of the most expert cracksman should be of interest to boatmen. It is a cylinder lock that is opened by a four-edged key operating four rows of pin tumblers. The cylinder may be used to replace locks now in use. Installation is quick and easy.

The lock has been tested by underwriters' laboratories and has been found to be jimmy-, drill- and grip-proof, and the key to be copy-proof. Only the original owner can order a duplicate key upon presenting his registry tag to the authorized dealer. An infinite number of key changes can be made so that in ten million keys no two will be alike.

The cylinder is made of armor steel and is countersunk in a grip-proof ring. Modernizing a lock by replacing the cylinder with a Dudley is simple. Having a tamper-proof lock on the cabin door will prevent theft and your boat may be left untenanted without misgiving. Install a lock made by the Dudley Lock Corporation.

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Hazard Korodless Wire Rope

UNDER that title, the Hazard Wire Rope Company, of Wilkes-Barre, Penn., has just issued a handsome catalog dealing with the uses of this rope for standing and running rigging, anchor cables, mooring rope, and steering gear cables. It is illustrated with photographs of numerous yachts ranging in size from Stars to Class J racers. It also contains a mine of information about the uses of this rope, with tables of strength, price list, and data on Tru-Loc pressed fittings, Korodless thimbles and shackles, serving and seizing wire, etc. Yachtsmen will find much valuable information in its pages.

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"Sparox" at the Show

THE Stanley Chemical Co., of East Berlin, Conn., a first time exhibitor at the National Motor Boat Show, reports several hundred contacts with naval architects, boatbuilders, operating personnel and yacht owners. In more than one instance, it is reported, prospective boat owners, after looking over the products of the company, insisted that "Sparox" be used as a finish for their boats.

The company has arranged for wide distribution of its products in the marine field. John J. Banninga, well known to the industry, is in charge of marine sales with offices in New York and a number of distributors have been appointed.

AND NOW . . .
We Present, THE POULIOT 28

An all 'round party and one-design racing sloop, already adopted by leading clubs at Detroit. Built from plans selected in competition with leading designers. The first order for six is nearing completion. An attractive price can be quoted for immediate orders.

Dimensions: L.O.A. 28 feet; Beam, 7 feet 6 inches; Draft, 2 feet 3 inches — with board down, 6 feet; Sail Area 291 square feet; Ballast 750 pounds.

SPECIFICATIONS

Oak frames — cedar planking — Philippine mahogany trim — steel centerboard and rudder — folding seats for ten — permanent backstay — combination spinnaker and balloon — cuddy forward, large enough to sleep in — hollow mast — aircraft wire rigging.

Designed and built by

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All types and sizes of inverted V-bottom and surface propeller boats from the largest to the smallest.

OUTBOARDS MODEL 13 $ 70.00
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HELMSMANSHIP
By E. G. MARTIN

"Anyone," Commander Martin says, "can teach a man to steer; no one can teach him to be a helmsman — that he must learn for himself."
The author discusses steering gear of various kinds and helm effect, making a strong case for the tiller in preference to the wheel, and gives a number of valuable hints for handling a tiller with the least effort. He has much to say about coming about, urging that the boat be sailed around instead of being slammed suddenly from one tack to the other. He defines proper balance and tells how to improve balance by shifting weights and trimming sail. For the racing man there are descriptions of the right and wrong way in which to round marks and an analysis of problems met when sailing in a tideway.
A book that every sailorman will enjoy and which he may read with profit. $1.50.

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23′ Knockabout..... $985– $1285
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Custom built craft of both wood and steel construction (riveted or welded).
Complete equipment for repairing, servicing and storing boats. 75-ton marine railway.

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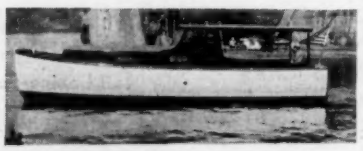
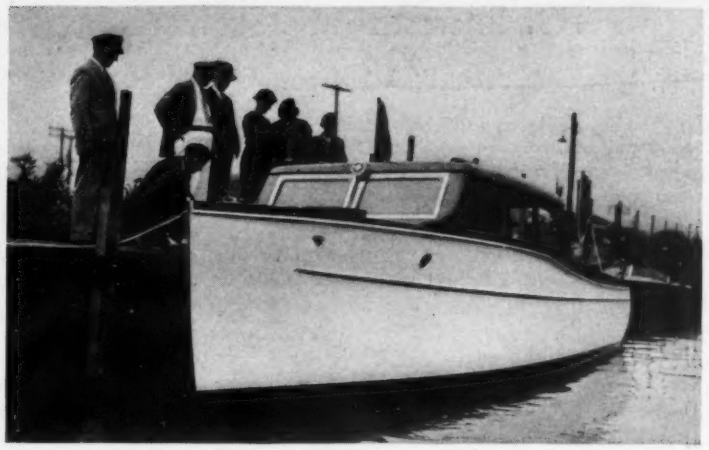
34-FOOT CRUISER
A popular Burger Cruiser — low priced, speedy, powerful, seaworthy, easy to handle. Here is comfort and luxury you will find it difficult to equal.





A new Chris-Craft 25-foot Streamline Cruiser, the first of her type to reach New Orleans, has just been launched

"Carolita" Being Reconditioned

THE 135′ steel Diesel yacht *Carolita* (ex *Ripple*), is now being reconstructed from plans and specifications by Masterson & Schlegel Inc., Yacht architects and brokers of New York. The work is being done by the Luders Marine Construction Co. The yacht, which was originally built in Germany, will have an entirely new layout below. Bathrooms will be fitted with modern plumbing fixtures. The deckhouses will be refinished inside, and covered with teak outside, and new teak decks will be laid.

The yacht will be modernized in every particular and newly decorated throughout.

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Gulfpride Motor Oil in New Cans

THE new super-refined Gulfpride Motor Oil, a recent development by the Gulf Refining Company, is now put up in cylindrical containers. These are sealed at the refinery and are proof against any adulteration. The purchaser is sure of getting not only the oil he is paying for but getting full measure in these tamper-proof cans. They save time in delivery, also.

Gulfpride, made from Pennsylvania crude, will continue to be refined by the company's exclusive Alchlor process.

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Hickman Sea Sled Co., Inc.

ALBERT HICKMAN, owner of the Sea Sled patents and president of the International Motor Boat Co., has announced the incorporation of the Hickman Sea Sled Company, Inc., New London, Conn., to carry on the development and production of Sea Sleds in this country. This company will control the United States building rights for all boats of Mr. Hickman's design, constructed and sold under the trade mark "Sea Sled."

With the recent improvements in the reliability and economy of high speed marine motors, a demand has grown up for Sea Sleds of special design, such as light cruiser types. It is the intention of the company to continue the development of all classes of boats under the Sea Sled patents, including the larger types which have been supplied for government service, shoal draft high speed river boats, and passenger carriers.

The small Sea Sleds, sold by the Sea Sled Sales Agency of New London, will also be inspected and tested by Mr. Hickman's engineering representatives before shipment. The new company invites inquiries from dealers and individuals, both regarding the standard Sea Sled outboard and inboard models from 13 to 28 feet, and for larger boats of special design.

\+ + +

New One-Design Class

A NEW one-design class from plans prepared by Sparkman & Stephens, Inc., has been adopted by the Tarratine Yacht Club, of Islesboro, Maine. The new boats will be built by the George Lawley and Son Corporation, Neponset, Mass. They will be 30′ length over all, 20′ length on water line, 6′ 8″ beam and 4′ 2″ draft. The total sail area will be about 350 square feet and masts will be hollow. The boats will have small cabins with transom seats each side.

Orders for eight boats have already been placed and among the owners are: Commodore Maitland Alexander, Winthrop W. Aldrich, Clarence Dillon, A. J. Drexel-Paul and Dudley Howe.

Minneford to Distribute Jonesport Boats

CHARLES BALTZER, builder of the well-known Jonesport Cruisers, advises that one of his 28-footers recently shipped to Puerto Rico has been enthusiastically received by the owner. In line with his plans for increased sales in 1935, the Minneford Sales Corporation, of City Island, New York, has been appointed metropolitan distributor of the Jonesport line of boats.

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The Chicago Show

THE ANNUAL Chicago National Boat and Sports Show will open May 4th and bids fair to surpass last year's exhibition in public interest. In addition to the exhibits, Manager Hubbard H. Erickson has arranged contests of various sorts, including outboard races, with high class competition. Everything connected with the sport, from dinghies to cruisers and from outboards to large Diesels, will be on display.

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The Valspar Contest

HERE are some of the entries in the Valspar Awards contest that is causing so much excitement among boat owners.

As most yachtsmen know by this time, the makers of Valspar Yacht Finishes are planning to give away a first prize, the winner's choice of any one of nine fine craft — cruisers, auxiliaries and speed boats listing up to

Entries in the Valspar Awards contest have been pouring in

$3200. There are three second prizes — boats and outboard motors — and ten third prizes listing up to $50. No wonder boat owners are sending in their entry blanks by the thousand!

For the information of any reader wishing to enter, the procedure is this: get an entry blank from Valentine & Co. or from any yard or dealer in Valspar Yacht Finishes. Send it in. Then you have until June 1st to concoct a letter on "Why Valspar Marine Paints and Varnishes are Best for My Boat." The awards will be made for the fourteen best entries.

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Protecting Moorings

TEREDO navalis, the shipworm, long common in the tropics, has been working his way north during the last few years and even in New England waters has been proving a menace. Besides riddling planks to which he gains entrance, he has been causing damage to mooring ropes.

The Plymouth Cordage Company has been investigating the problem of stopping his ravages and biological research has been under way for several years. Testing grounds have been established at several points and ropes treated with preservatives made from new formulae have been tried out under water.

Boatmen are now offered a choice of three Plymouth treated ropes: "Sea-Proof," "Copper Oleate," and "Cop-Painted." The latter, which is red in color, provides the greatest resistance to the attack of marine organisms and possesses the best anti-fouling properties. Its toxic effect lasts for the entire life of the rope and its use will prolong the life of a mooring pennant in infested waters.

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